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BOARD OF EDITORS { Mr. Horace E. Smith, Chief Clerk of Weather Bureau, Professors Henry A. Hazen, Thomas Russell, and Charles F. Marvin, and Mr. Edward B. Garriott, in charge of Review Room.

INTRODUCTION.

This REVIEW is based on reports for September, 1892, from 2,787 regular and voluntary observers. These reports are classified as follows: 162 reports from Weather Bureau stations; 46 reports from United States Army post surgeons; 1,869 monthly reports from state weather service and voluntary observers; 195 reports through the Central Pacific Railway Company; 485 marine reports through the co-operation of the Hydrographic Office, Navy Department; 30 reports from Canadian stations; marine reports through the "New York Herald Weather Service"; monthly reports from local services established in all states and territories; and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

CHARACTERISTICS OF THE WEATHER FOR SEPTEMBER, 1892.

From the upper Missouri valley to New Mexico the month was the warmest, and on the west Gulf coast and in the middle Rocky Mountain region it was the driest September on record. Drought prevailed generally over the middle and southern plateau and middle Rocky Mountain regions. The month was also very dry in the middle and lower Missouri valleys and in parts of Wisconsin and eastern Kentucky. The coolest weather of the month between the Mississippi River and the Rocky Mountains was noted from the 11th to the 15th. On the 11th temperature below freezing and heavy frost were reported in Wyoming; on the 12th frost injured vegetation in New Mexico; and on the 14th the frost line was carried to Arkansas. During the advance of a cool wave from the plateau region to the Atlantic coast from the 23d to the 27th the frost line was carried to Tennessee, western North Carolina, and western Virginia. From the 27th to the 29th a cool wave advanced from the Northwest to the Atlantic coast, attended on the 29th by frost in eastern North Carolina.

TEMPERATURE.

The month was warmer than usual, except in the middle Atlantic and middle and east Gulf states, and over western California. The greatest excess in temperature was noted over the eastern plateau region, on the northeast slope of the Rocky Mountains, and in the valley of the Red River of the North, where it was 4° to 5°, and the most marked deficiency was reported in the interior of the middle Gulf states, where the month was 2° to 3° cooler than the average September.

PRECIPITATION.

The rainfall was generally deficient. Small areas of excess are shown on the south Atlantic, middle Gulf, and extreme north Pacific coasts, and in the central lake region. The most marked deficiency was noted on the Texas coast, where it was 4.00 to 6.00 inches, and the deficiency was 2.00 to 3.00 inches on the middle Atlantic coast, in western Florida, and the lower Missouri valley. The greatest excess in monthly precipitation, 4.00 to 6.00 inches, was reported on the south Atlantic and extreme north Pacific coasts.

Snow fell in the mountains of western Wyoming and northeastern Oregon on the 23d and at Middletown, Conn., on the 27th. At Mount Washington, N. H., snow was reported on the 6th, 7th, 26th, and 27th.

STORMS.

Exceptionally severe local storms were not reported. The occurrence of local storms was noted most frequently in New York, Michigan, Wisconsin, Iowa, and Missouri, where they were reported on three to four dates. The widest distribution of storms is shown on the 10th, 25th, and 26th. On the 10th local storms were noted in New York, Ohio, Illinois, Wisconsin, Iowa, Missouri, and Kansas; on the 25th in New York, New Jersey, Delaware, Pennsylvania, Kentucky, and Michigan; and on the 26th in New England, with northwest gales over the middle Atlantic states.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean atmospheric pressure for September, 1892, as determined from observations taken daily at 8 a. m. and 8 p. m. (75th meridian time), is shown on Chart II by isobars.

The normal pressure for September is highest from the Atlantic coast between the 30th and 45th parallels westward to the middle Mississippi valley, where it is above 30.05, and it is above 30.00 on the north Pacific coast and over districts lying east of the middle and southern Rocky Mountain regions. The normal pressure is lowest in the lower Colorado valley, where it is below 29.85, and it is below 29.90 in the upper Saskatchewan valley and over the west part of the southern plateau region south of the 40th parallel.

In September there is usually an increase of pressure over the United States, except on the extreme north Pacific coast

and over the extreme southern part of the Florida Peninsula, where the normal values are slightly lower than for August. The greatest increase of pressure occurs over the northern Rocky Mountain and plateau regions, and from the middle Mississippi valley over the middle Atlantic and New England states, where the normal values are more than .05 higher than for August.

In September, 1892, the mean pressure was highest over the middle Atlantic and southern New England states, where it was above 30.15, and the pressure was above 30.00 east of a line traced from Lake Superior to New Mexico, and along the Pacific coast between the 37th and 46th parallels. The mean pressure was lowest over the west part of the southern plateau region, where it was below 29.85, and the mean readings were below 29.90 in the upper Saskatchewan valley.

A comparison of the pressure chart for September with that of the preceding month shows an increase of pressure, except over the Florida Peninsula and on the Pacific coast north of the 40th parallel. The greatest increase of pressure occurred from the south New England and New Jersey coasts over eastern Pennsylvania, Maryland, and the interior of Virginia, where it was more than .15, and the most marked decrease was noted on the extreme north Pacific coast, where it was more than .10.

The mean pressure was above the normal, except from the north Pacific coast over the middle and northern plateau and northern Rocky Mountain regions, and over Lake Superior and the lower Saint Lawrence valley. The greatest departure above the normal pressure was noted on the southern New England and New Jersey coasts and at Lynchburg, Va., where it was .10, and the most marked departure below the normal pressure was reported in Washington, where it was .05.

HIGH AND LOW AREAS.

The paths of areas of high and low barometric pressure for September, 1892, are plotted on Charts IV and I, respectively, and some of the more prominent features of the areas are shown in the table at the end of this chapter.

HIGH AREAS.

Eight high areas appeared, the average number traced for September during the last 19 years being 6.5. Of the high areas traced for the current month, one, a continuation of high area VII for August, occupied the western lake region at the opening of the month, 5 appeared over the British Northwest Territory, and 2 advanced from the north Pacific coast. Three of the high areas from the British Northwest Territory moved southeastward over the central valleys, and 2 east-southeast over the northern lake region. All of the high areas, save one from the north Pacific coast, passed off the Atlantic coast between the 40th and 45th parallels. The average velocity of the high areas, 25 miles per hour, corresponded closely with the average velocity of high areas traced for September of preceding years. The following is a description of the high areas traced for the current month:

I.—Was a continuation of high area VII for August, 1892, and occupied the western lake region on the 1st, with pressure above 30.30. On that date the cool wave of the latter part of August extended over the Atlantic coast states, with a temperature fall of 5° to 15° from New England to the Gulf States, and light frost in Upper Michigan and western Lower Michigan. During the 2d the high area advanced over the middle Atlantic and New England states, the temperature fell more than 10° over northern New England and the Canadian Maritime Provinces, and light frost was reported in Lower Michigan, northern New England, and in the mountain regions of Pennsylvania. During the 3d the center of this high area passed off the New England coast.

II.—The pressure increased over the western Saskatchewan valley during the 2d, and the morning of the 3d this high area occupied the region north of western Montana, with pressure above 30.30. The night report of the 2d showed a fall in temperature of 10° to 20° over Montana and the western Dakotas. On the 3d the temperature fell 10° to 20° from Colorado to Minnesota, and the first light frost of the season was reported at Helena, Mont. During the 4th the center of the high area advanced over the Dakotas, and the temperature fell 5° to 12° from the southeast slope of the Rocky Mountains over the western lake region. During the 5th the center reached northern Missouri and the cool wave extended to the Alleghany Mountains, the first light frost was noted at Fort Buford, N. Dak., and the first heavy frost of the season was reported at Bismarck, N. Dak. Moving eastward to the Alleghany Mountain range by the 7th, the high area shifted position to the lower lakes by the evening of that date, and passed thence southeastward off the New England coast during the 8th, with pressure above 30.40.

III.—Apparently moved northward off the Pacific coast, and the evening of the 6th appeared central off the north Washington coast, with pressure above 30.20 and a temperature fall of 10° to 16° over the northern plateau region and on the northeast slope of the Rocky Mountains. During the 7th the high area moved over the northern plateau and the temperature fell 10° to 15° over the Dakotas and Montana. During the 8th it passed rapidly southeastward and disappeared by an increase of pressure over the middle Missouri valley, attended by a temperature fall of 10° to 20° on the middle-eastern slope of the Rocky Mountains, and the first light frost of the season at Lander, Wyo.

IV.—The pressure was high over the western Saskatchewan valley during the 9th, and the morning of the 10th this high area was central over Alberta, with pressure above 30.40. By the evening of the 10th the high area had moved southeastward over eastern Wyoming, and the temperature had fallen 10° to 24° from the middle Missouri valley to the middle-eastern slope of the Rocky Mountains. During the 11th and 12th the center remained nearly stationary on the middle-eastern slope of the Rocky Mountains. During the 11th the cool wave occupied the region between the western lake region and Texas, the temperature fell more than 20° in southern Missouri, the lowest temperature of the month was noted in the middle and southern Rocky Mountain regions, and the first heavy frost occurred at Lander, Wyo. During the 12th the cooler condition extended eastward over the Lake region and central valleys, the lowest temperature of the month occurred on the middle and southern Rocky Mountain slopes, and the first heavy frost was noted at Fort Stanton, N. Mex. By the morning of the 13th this high area had united with high area IV*a*, which had advanced from the Northwest.

IV*a*.—Appeared north of Montana the morning of the 12th with pressure 30.30, passed thence to South Dakota by the morning of the 13th, with a marked decrease of pressure, and reached Nebraska in the evening. On that date the lowest temperature of the month was noted in the Dakotas, and the first heavy frost of the season was reported at Fort Buford, N. Dak. The morning report of the 14th showed high pressure over the middle-western and southwestern states, with two centers of higher pressure, one over southeastern Nebraska and the other near Fort Smith, Ark. By the evening report of the 14th the pressure was highest at Memphis, Tenn. On this date the temperature fell 10° or more from the Great Lakes to the Gulf of Mexico, the lowest temperature of the month occurred in the middle and lower Missouri valleys, and the first heavy frost of the season was noted at points in the Dakotas and Nebraska. During the 15th the high area moved slowly eastward to the mountain regions of Tennessee, the Carolinas, and Virginia, where it remained nearly stationary until the night of the 16th, with the lowest temperature of the month in the Gulf States. By the

morning of the 17th this high area had united with number V, which had advanced from the Northwest.

V.—Appeared north of eastern Montana the evening of the 14th, with pressure above 30.00, and a temperature fall of 10° to 20° in the Saskatchewan Valley, moved thence to the middle Missouri valley by the evening of the 15th, and united over western Pennsylvania with high area IV*a* the morning of the 17th. On that date the center passed off the New Jersey coast, with pressure above 30.30. A slight fall in temperature only was noted in the central valleys and Lake region attending the advance of this high area.

VI.—Appeared over the eastern Saskatchewan valley the morning of the 18th, with pressure above 30.20, and reached southern Manitoba by the night report of that date, with a temperature fall of 10° to 20° over the Dakotas and northern Minnesota. During the 19th the center moved eastward over northern Lake Superior, and the temperature fell 10° to 24° over the Lake region and northern New England. On the 20th the high area advanced over northwestern New England, with pressure above 30.30, the first heavy frost of the season was reported at Alpena, Mich., and the temperature fell 10° to 20° in the middle Atlantic and south New England states. During the 21st the center passed southeastward off the New England coast.

VII.—Appeared off the middle Pacific coast on the 24th, with pressure 30.20 at Eureka, Cal., and a temperature fall of more than 20° in the Dakotas by the evening report. Moving rapidly eastward the center reached Nebraska the evening of the 25th, and the temperature fell 20° to 30° in the Lake Superior region. During the 26th this high area occupied the central valleys, and the cool wave extended over the middle Atlantic and New England states. Passing southeastward over Kentucky during the 27th the high area reached the middle Alleghany Mountains where it remained during the 28th, from which region it moved northward and united with high area VIII by the morning of the 29th.

VIII.—Appeared north of Montana the morning of the 27th, with pressure above 30.10, and passed rapidly southeastward over the upper lake region during the 28th, attended by a temperature fall of 10° to 20° over the upper lakes. On the 29th the center passed southeastward over western New England, with pressure above 30.30, and a fall in temperature of more than 10° along the New Jersey and New England coasts. By the morning of the 30th the center was central off the New Jersey coast, with pressure above 30.40, from which position it apparently settled southward off the Virginia and North Carolina coasts.

LOW AREAS.

The low barometer areas for September usually follow more regular paths than those traced for August. The principal path east of the Rocky Mountains is between the 45th and 50th parallels. Less frequented paths are shown from the Saskatchewan Valley and the middle slope of the Rocky Mountains to the upper lakes. An average of less than one low area per month crosses districts south of the 40th parallel. The average velocity of September low areas, 26 miles per hour, is the same as the average velocity for August.

The tracks of ten areas of low barometric pressure are traced for September, 1892, this number corresponding with the average number noted for September during the last 19 years. The average velocity, 26 miles per hour, also corresponded with the average velocity of low areas for September. Of the low areas traced for the current month at least three advanced from the Pacific coast north of the 50th parallel, six appeared in the Saskatchewan Valley, and one moved northeastward from the Gulf of Mexico. The low areas from the Pacific coast and the British Northwest Territory moved eastward north of the Lake region, and one of the Pacific coast low areas reached the Gulf of Saint Lawrence. Several subsidiary developments appeared between the Mississippi River and the Rocky Mountains. The following is a description of the low areas traced:

I.—This low area extended from the eastern Saskatchewan valley over western North Dakota and eastern Montana at the opening of the month, with pressure below 29.80. By the evening report the center had shifted position slightly to the southeastward, light rain had fallen in the eastern Saskatchewan valley, and high southeast winds occurred in the middle Missouri and upper Red River of the North valleys. Reports of the 2d showed the formation of a trough of low pressure extending from Minnesota to Arizona, with two cyclonic centers, one over the eastern Dakotas and the other over eastern Colorado. On that date rain fell throughout the extreme northwest, high winds were reported over Nebraska and the eastern Dakotas, and the temperature rose 10° to 15° over the Ohio Valley and the western Lake region. On the 3d the trough of low pressure was divided by high area II which was advancing from the Northwest, one part, low area I, passing to the Lake Superior region and the other, low area I*a*, moving southward to eastern New Mexico, rain fell in large areas between the Mississippi River and the Rocky Mountains, heavy thunderstorms were reported in western Kansas during the afternoon and evening, and a marked rise in temperature occurred from the Ohio Valley over the Saint Lawrence Valley.

During the 4th the center of disturbance passed north of Lake Huron with an appreciable loss of strength, the rain area extended over the western Lake region and the lower Ohio and middle and lower Mississippi valleys, and the highest temperature of the month, 85° to 87°, was noted at points in the upper Ohio valley and the lower lake region. By the evening of the 5th the center had reached northern New England, and the rain area had reached the middle Atlantic and New England coasts. During the 6th the center of disturbance advanced over the northern part of the Gulf of Saint Lawrence, and rain was followed by clearing weather over the middle Atlantic and New England states.

II.—Appeared over Alberta on the 5th, with pressure 29.70 at the evening report, and passed thence to South Dakota by the evening of the 6th, with heavy thunderstorms in central North Dakota. During the next 24 hours the storm-center moved to Kansas, where it was apparently dissipated by an increase of pressure the night of the 7th, its passage being attended by rain and fresh southeast winds from the upper Mississippi valley over the southwestern lake region, thunderstorms in Wisconsin, and a temperature rise of 10° to 15° from the upper Mississippi valley over the Dakotas.

III.—Appeared over Alberta the evening of the 8th, with pressure below 29.80, and moved thence rapidly southeastward to eastern South Dakota by the evening of the 9th, with rain from the western lake region and the upper Mississippi valley over eastern Nebraska and the Dakotas, thunderstorms from northern Indiana and northern Illinois over Iowa, Wisconsin, and Minnesota, and a rise in temperature of 10° to 16° from the middle Rocky Mountain region over the middle Missouri valley.

On the 10th the low area was central over Upper Michigan, the rain area extended over the Lake region and northern Ohio valley, and thunderstorms were reported in Missouri, Iowa, Wisconsin, northern Illinois, northern Ohio, and western New York. During the 11th and 12th the center of disturbance remained in the Lake Superior region. On the 11th rain fell from the western lake region to Texas. During the 12th the pressure decreased over the central valleys. The morning of the 13th a trough of low pressure extended from the Great Lakes to the east Gulf coast, low area III had lost its identity, and low area IV dominated the weather conditions from the Great Lakes to the Gulf and middle and south Atlantic coasts.

IV.—The presence of an area of low pressure of tropical origin over the central part of the Gulf of Mexico was indicated by reports of the 11th. On that date the 12-hour decrease of pressure was more than .10 inch from the lower lakes to the east Gulf coast, and heavy rain fell at points along the Gulf coast. Morning reports of the 12th showed a 24-hour decrease of pressure of .10 to .20 inch over the east Gulf states, and during the 12 hours ending 8 p. m. the pressure decreased .10 to .18 inch from the middle Gulf coast to New England. At the evening report of the 12th the storm was central near New Orleans, La., and high wind and heavy rains were noted on that date along the Gulf coast. The morning of the 13th the disturbance was central over Kentucky, with pressure below 29.60, and at the evening report the center had passed to eastern Lake Erie, with pressure below 29.40. On that date rain fell generally east of the Mississippi River, severe local storms occurred from the lower lakes and New York over the Carolinas, and heavy gales, reaching a velocity of 54 miles per hour from the northwest at Cleveland, Ohio, prevailed over the central and eastern lake regions.

At the morning report of the 14th the center was near Parry Sound, Ont., and during the day it moved slowly northeastward, with an apparent loss of energy. Heavy wind continued over the lower lakes, and strong gales prevailed over Long Island Sound. The rain area contracted over the northeastern part of the country, and high area IV, which had remained nearly stationary over the Western States from the 11th to the 14th, passed southeastward to the middle Mississippi valley. Moving slowly north of east this low area disappeared north of the Gulf of Saint Lawrence during the 16th.

V.—Apparently advanced from the Pacific coast and the evening of the 12th was central north of Washington, with pressure below 29.80. Moving eastward north of the Lake region this low area apparently united with low area IV by the evening of the 14th, its passage being unattended by noteworthy features.

VI.—Was central over the upper Saskatchewan valley the evening of the 16th, and moved thence over Manitoba during the 17th, with temperature rising above 90° in North Dakota. On the 18th the center reached the lower Saint Lawrence valley, and by the evening of the 19th had passed south of east over Nova Scotia. No rain attended this low area until the 19th, when showers occurred from the lower lakes over New England, and thunderstorms were reported in extreme northwestern Pennsylvania.

VII.—The pressure was low over the Saskatchewan Valley on the 18th, and the night of the 19th this low area was central over northern Alberta, with pressure below 29.50, and rain over the northern plateau region. During the 20th and 21st the center moved slowly eastward, with pressure falling below 29.30. The morning of the 22d the pressure was low from Minnesota to the middle Rocky Mountain region, a subsidiary development of slight energy appeared central over Kansas, and the maximum temperature rose above 90° in the lower Missouri valley during the afternoon. The night of the 22d this low area had apparently united with low area VIII which had advanced eastward over Alberta. No marked disturbances or extensive rain areas attended this low area. A destructive local storm was, however, reported at Manistee, Mich., and thunderstorms were reported in northern Iowa on the 22d.

VIII.—Apparently advanced from the north Pacific coast over Alberta during the 22d, with pressure below 29.20 at the evening report. On that date heavy rain fell on the Washington coast and light rain in eastern Washington, and the wind reached a velocity of 60 miles per hour from the south at Fort Canby, Wash. On the 23d the center moved eastward over the upper Saskatchewan valley, without an appreciable loss of energy. On that date the influence of the low area extended over the Lake region and the central valleys, although rain fell in small areas only in the Lake region. The highest temperature of the month occurred in the upper Mississippi and middle Missouri valleys, a reading of 98° being noted at Huron, S. Dak. By the evening of the 24th the center of disturbance had reached the region north of Lake Superior, and a trough of low pressure extended thence to northern New Mexico, rain had fallen in small areas from the western lake region to the Rocky Mountains, the highest temperature of the month was recorded at points in the western lake region, and brisk southwesterly winds prevailed over Lake Superior.

Tabulated statement showing principal characteristics of areas of high and low pressure.

Barometer.	First observed.			Last observed.		Duration.	Velocity per hour.	Maximum pressure change in 12 hours, maximum abnormal temperature change in 12 hours, and maximum wind velocity.									
	Date.	Lat. N.	Long. W.	Lat. N.	Long. W.			Station.	Rise.	Date.	Station.	Fall.	Date.	Station.	Direction.	Miles per hour.	Date.
High areas.		°	°	°	°	*Days.*	*Miles.*		*Inch.*			°					
I	1	44	88	42	66	2.5	19	Father Point, Quebec	.44	1	Atlantic City, N. J	8	1	Block Island, R. I	ne.	34	2
II	3	51	115	42	69	6.0	22	Pierre, S. Dak	.28	3	Miles City, Mont	22	2	Bismarck, N. Dak	nw.	30	4
III	6	48	126	42	98	2.0	31	Walla Walla, Wash	.28	6	Helena, Mont Cheyenne, Wyo	16 16	6 7	Fort Canby, Wash	s.	36	6
IV	10	49	113	43	100	3.0	18	Medicine Hat, N. W. T	.28	10	Denver, Colo	16	10	Pueblo, Colo	ne.	30	10
IV *a*	12	51	110	35	90	2.5	25	Louisville, Ky	.22	13	Concordia, Kans	17	13	Bismarck, N. Dak	nw.	28	12
IV *b*	14	34	96	41	80	3.0	22	Charlotte, N. C	.22	15	San Antonio, Tex	13	14	Amarillo, Tex	s.	16	14
V	14	50	105	40	73	3.0	28	Prince Albert, N. W. T	.52	14	Huron, S. Dak	18	15	Chicago, Ill	n.	30	16
VI	18	51	104	40	71	3.0	24	Minnedosa, Man	.56	18	Minnedosa, Man	29	18	Block Island, R. I	ne.	40	20
VII	24	41	125	45	77	4.5	32	St. Paul, Minn	.34	25	Helena, Mont	26	23	Moorhead, Minn	nw.	28	25
VIII	27	51	111	40	71	3.0	32	Swift Current, N. W. T	.48	27	Swift Current, N. W. T	22	27	Block Island, R. I	ne.	36	29
Mean						3.2	25		.36			19				30	
Low areas.									Fall.			Rise.					
I	1	49	104	49	64	5.0	19	Halifax, N. S	.30	5	Cheyenne, Wyo	18	1	Huron, S. Dak ....do	se. se.	42 42	1 2
II	5	52	115	39	97	2.0	28	Medicine Hat, N. W. T	.36	5	Calgary, N. W. T	19	4	.....do	ne.	48	7
III	8	52	123	49	88	4.0	20	Calgary, N. W. T	.36	8	Spokane, Wash	16	8	Chicago, Ill	sw.	38	10
IV	12	30	90	51	65	3.5	24	Toronto, Ont	.42	13	Father Point, Quebec	8	14	Cleveland, Ohio	nw.	54	13
V	12	53	120	52	100	1.5	25	Calgary, N. W. T	.46	12	Huron, S. Dak	30	14	Winnipeg, Man	n.	24	14
VI	16	54	115	46	55	3.5	34	.....do	.30	15	Moorhead, Minn	18	16	Marquette, Mich	sw.	36	17
VII	19	54	113	53	98	2.0	14	.....do	.44	18	Minnedosa, Man	17	19	Valentine, Nebr Sioux City, Iowa	w. w.	48 48	21 21
VIII	22	53	121	50	66	5.0	23	Edmonton, N. W. T	.42	22	North Platte, Nebr	20	22	Fort Canby, Wash	s.	60	22
IX	25	53	112	49	90	1.5	29	Calgary, N. W. T	.42	25	Havre, Mont	25	25	Buffalo, N. Y	sw.	48*	27
X	28	52	120	50	67	2.5	39	Prince Albert, N. W. T	.54	28	.....do	25	28	Huron, S. Dak	s.	48	29
Mean						3.1	26		.40			20				45	

* Mount Washington, N. H., 100, nw., 27th.

During the 25th the low area moved north of the lower lake region, rain generally fell in the Lake region and the Ohio Valley, local storms were reported in western New York, western Pennsylvania and Michigan, and brisk southwest winds prevailed over the lower lakes. During the 26th the center passed to the lower Saint Lawrence valley, with a marked increase in energy, the rain area contracted over New England, severe thunderstorms occurred throughout New England, New York, and in northeastern Pennsylvania, and wind velocities of 52 and 51 miles per hour were reported at Woods Holl, Mass., and Oswego, N. Y., respectively. On the 27th, when low area VIII was probably central near the mouth of the Saint Lawrence River, a wind velocity of 100 miles per hour from the northwest was noted at Mount Washington, N. H.

IX.—Appeared over the middle Saskatchewan valley the night of the 25th, with pressure below 29.70, and rain and high winds on the Washington coast. Moving south of east the center reached Manitoba the night of the 26th, with pressure below 29.60, and during the 27th apparently passed rapidly eastward and united with low area VII over the northern part of the Gulf of Saint Lawrence, its passage being unattended by rain or notable disturbances.

X.—The advance of this low area over the Pacific coast north of Washington was shown by reports of the 27th, and the morning of the 28th the center occupied the region north of Washington, with pressure 29.50. By the evening of the 28th the center of disturbance had moved eastward over the Saskatchewan Valley, with pressure below 29.30, and during the 29th passed over Manitoba with an apparent loss of strength. The night report of the 30th showed this low area central over the lower Saint Lawrence valley. The passage of this area of low pressure from the Pacific Ocean to the Gulf of Saint Lawrence was unattended by precipitation. Unusually high temperatures were reached from the northern plateau region over the northern districts. In Montana the maximum varied from 89° to 93°, and in the Dakotas from 90° to 97° on the 28th.

NORTH ATLANTIC STORMS FOR SEPTEMBER, 1892.

[*Pressure in inches and millimeters; wind-force by Beaufort scale.*]

The paths of storms that appeared over the west part of the north Atlantic Ocean during September, 1892, are shown on Chart I. These paths have been determined from reports of observations by shipmasters received through the co-operation of the Hydrographic Office, Navy Department, and the "New York Herald Weather Service."

The north Atlantic normal pressure for September is above 30.10 (764) from the northwest coast of Africa westward over the middle-eastern districts of the United States. The normal pressure is lowest from mid-ocean in latitude north 60° over Iceland, Spitzbergen, and eastern Greenland, where it is below 29.70 (754). There is usually a decrease of pressure over the north Atlantic in September, except in the middle latitudes and over the eastern part of the ocean south of the 55th parallel. The most marked decrease occurs north of the 60th parallel, and in an area extending northeastward from the eastern West Indies to the Azores, where it is more than .05. The greatest increase is shown from the Atlantic coast between the 35th and 50th parallels over the Banks of Newfoundland, where it exceeds .05.

The storms of September usually pass east-northeast from Newfoundland to the region north of Scotland, a limited number, averaging less than two per month, advancing over the British Isles. The average velocity of the storms in the middle latitudes is 19 statute miles per hour. An average of two storms per month traverse the ocean from the American to the European coasts in September. Well-defined and destructive September cyclones have averaged about 2 per month over the West Indies. These storms generally move westward from the region of the Windward Islands and recurve northward over the Gulf of Mexico. About one in five of the storms of this class reach the European coast, one in five have no easterly component, one in ten disappear over Mexico, and the balance dissipate over the eastern part of the United States or over the Atlantic Ocean.

No storms of marked severity were reported on the north Atlantic Ocean in September, 1892. At the opening of the month low area VIII for August, 1892, was central near the mouth of the Saint Lawrence River. This storm apparently crossed the ocean. The morning of the 2d it had advanced north of Newfoundland, and on the 3d was central north of the Grand Banks, from which region it moved north-northeast and passed north of the British Isles during the 7th, its passage being attended on the 5th and 6th by westerly gales of force 8 to 9 over the eastern part of the ocean. On the 1st the pressure was low northwest of the British Isles, and on the 2d a storm was central north of Ireland. The night of the 2–3d this storm apparently moved eastward over the northern part of the British Isles.

On the 6th low area I moved eastward over the northern part of the Gulf of Saint Lawrence, and the morning of the 7th was central off the Labrador coast, with pressure below 29.60 (752). From that position the center moved rapidly northeastward and disappeared in the direction of Iceland on the 8th. The morning of the 11th a storm was apparently central to the southward of Bermuda, and from midnight of the 11th to 4 a. m. of the 12th a thunderstorm, with high wind and rain, prevailed over the Bermuda Islands. Moving rapidly northeastward, this storm passed east of the Grand Banks during the 13th, with pressure about 29.70 (754) and north gales of force 8 to 9, and reached mid-ocean in latitude about 50° on the 14th, with pressure about 29.30 (744) and westerly gales of force 8 to 10. During the 15th this storm passed over or north of the British Isles.

On the 11th reports about the British Isles indicated the approach of a storm from the northwest, and on the 12th the disturbance was apparently central over Ireland, with pressure below 29.70 (754) and gales of force 10 east of the 20th meridian. By the 13th this storm had apparently passed over the North Sea. On the 16th low area IV passed north of the Gulf of Saint Lawrence, and on the 17th was central off the Labrador coast, where the barometer continued low until the 19th. By the 20th this storm had moved over mid-ocean in high latitudes, where the pressure continued low until the 22d, after which the area of low pressure apparently moved eastward.

On the 20th low area VI was central south of Newfoundland, from which region the center moved rapidly northeastward and joined the area of low pressure central over mid-ocean, attended by north gales of force 10, and pressure below 29.70 (754) between the 30th and 40th meridians. With the advance of this storm over mid-ocean the pressure decreased northwest of the British Isles and fresh gales were reported over the eastern part of the ocean on the 24th and 25th. On the 26th the pressure was below 29.40 (747) near the 20th meridian, and westerly gales of force 8 were encountered in that region. By the 27th the center of disturbance had passed eastward over the British Isles. The morning of the 28th

low area VIII was apparently central over the northeast part of the Gulf of Saint Lawrence, and by the morning of the 29th this storm had passed northeastward off the Labrador coast. By the 30th the center had advanced to the 45th meridian and a storm of considerable strength had advanced from the northwest over the British Isles.

OCEAN FOG IN SEPTEMBER.

The limits of fog belts west of the 40th meridian, as reported by shipmasters, are shown on Chart I by dotted shading. Near the Banks of Newfoundland fog was reported on 19 dates; between the 55th and 65th meridians on 5 dates; and west of the 65th meridian on 3 dates. Compared with the corresponding month of the last 4 years the dates of occurrence of fog near the Grand Banks numbered 4 more than the average; between the 55th and 65th meridians, 1 less than the average; and west of the 65th meridian, 6 less than the average. The fog reported by shipmasters and that noted by observers of the Weather Bureau on the New England and middle Atlantic coasts generally attended the advance or passage of general storms.

OCEAN ICE IN SEPTEMBER.

Ice was reported only in, and slightly to the eastward of, the Straits of Belle Isle, where it was encountered throughout the month. A reference to the table will show that in the last 10 years there have been but two Septembers, in 1891 and 1892, for which ice has not been reported south of the 50th parallel, and that the eastern limit of ice for the current month is nearly 3° farther west than previously reported for September. The positions of icebergs and field ice reported for September, 1892, are shown on Chart I by ruled shading.

The following table shows the southern and eastern limits of the region within which icebergs or field ice were reported for September during the last 10 years:

Southern limit.			Eastern limit.		
Month.	Lat. N.	Long. W.	Month.	Lat. N.	Long. W.
	° ′	° ′		° ′	° ′
September, 1883.	48 25	47 10	September, 1883.	49 01	44 33
September, 1884.	46 06	53 21	September, 1884.	47 39	49 14
September, 1885.	45 40	48 22	September, 1885.	48 40	46 27
September, 1886.	46 40	53 00	September, 1886.	48 00	48 40
September, 1887.	45 37	40 50	September, 1887.	45 37	40 50
September, 1888.	Off Cape	Race	September, 1888.	53 00	52 08
September, 1889.	46 21	48 22	September, 1889.	48 59	46 48
September, 1890*	45 30	48 00	September, 1890.	50 30	46 22
September, 1891.	Straits of	Belle Isle	September, 1891.	53 18	51 20
September, 1892.	Straits of	Belle Isle	September, 1892.	52 04	54 55
Mean.	47 34	50 52	Mean.	49 36	48 06

*On the 4th a large lump of ice 100 feet long and 6 feet above water was reported in N. 36° 49′, W. 42° 18′; this is the lowest latitude in which ice was ever reported in the north Atlantic Ocean.

TEMPERATURE OF THE AIR (expressed in degrees Fahrenheit).

The distribution of mean temperature over the United States and Canada for September, 1892, is exhibited on Chart II by dotted isotherms. In the table of miscellaneous meteorological data the monthly mean temperature and the departure from the normal are given for regular stations of the Weather Bureau. The figures opposite the names of the geographical districts in the columns for mean temperature and departure from the normal show, respectively, the average for the several districts. The normal for any district may be found by adding the departure to the current mean when the temperature is below the normal and subtracting when above. The monthly mean temperature for regular stations of the Weather Bureau represents the mean of the maximum and minimum temperatures.

The mean temperature was highest in the lower Colorado and Gila valleys, where it was above 90, and it was above 80 in western and southern Arizona, southeastern California, and at Key West, Fla. In the south Atlantic, Gulf, and Southwestern states, the west and south portions of the southern plateau region, and in the central valleys of California the mean temperature was above 70. The lowest mean temperature was noted in the upper Saskatchewan valley, on the north coast of Lake Superior, and at mountain stations in Colorado, where it was below 50, and the mean values were below 60 north of a line traced from the central New England coast over the central lake region, thence to east-central Montana, thence to northern New Mexico, thence to eastern Oregon, thence to northeastern California, and east of this line traced thence over eastern Oregon, and thence eastward over the valley of the Columbia River. The mean temperature was also below 60 along the immediate Pacific coast north of San Francisco, Cal.

DEPARTURES FROM NORMAL TEMPERATURE.

The mean temperature was above the normal, except in the middle and south Atlantic and Gulf states, and along the middle and south Pacific coasts. The greatest departure above the normal temperature was noted over the eastern part of the plateau region, and over northern Minnesota and parts of the Dakotas and Upper Michigan, where it was 4 to 5. The most marked departure below the normal temperature was reported in the interior of the middle Gulf states, at Baltimore, Md., and San Diego, Cal., where the month was 2, or more, cooler than usual.

The following table shows for certain stations, as reported by voluntary observers, (1) the normal temperature for September for a series of years; (2) the length of record during which the observations have been taken, and from which the normal has been computed; (3) the mean temperature for September, 1892; (4) the departure of the current month from the normal; (5) and the extreme monthly mean for September, during the period of observation and the years of occurrence:

State and station.	(1) Normal for the month of Sept.	(2) Length of record.	(3) Mean for Sept., 1892.	(4) Departure from normal.	(5) Extreme monthly mean for September.			
					Highest.	Year.	Lowest.	Year.
Arizona.	°	Years	°	°	°		°	
Fort Apache	66.2	20	66.2	0.0	71.4	1879	61.0	1884
Fort Mohave	85.6	20	88.0	+ 2.4	90.2	1875	81.8	1876
Whipple Barracks	66.3	21	67.8	+ 1.5	74.4	1879	60.5	1884
Arkansas.								
Keesees Ferry	71.0	11	70.2	− 0.8	76.4	1884	67.5	1883
California.								
Fort Bidwell	62.1	21	61.9	− 0.2	65.9	1880	54.0	1884
Riverside	72.7	10	.....	.....	76.8	1883	69.2	1884
Colorado.								
Las Animas	65.4	10	67.6	+ 2.2	67.6	1892	63.5	1883
Florida.								
Merritts Island	79.7	10	80.0	+ 0.3	82.5	1882	78.0	1890
Georgia.								
Forsyth	76.4	18	75.2	− 1.2	82.2	1884	72.8	1888
Idaho.								
Boise Barracks	61.1	18	63.0	+ 1.9	68.0	1888	54.6	1884
Fort Sherman	56.2	9	58.6	+ 2.4	58.6	'85, '91, '92	52.9	1881
Illinois.								
Centralia	66.3	11	.....	.....	76.0	1881	52.5	1882
Indiana.								
Lafayette	64.1	9	65.4	+ 1.3	69.7	1891	61.2	1883
Indian Territory.								
Fort Supply	69.7	11	71.2	+ 1.5	71.7	1886	66.6	1890
Iowa.								
Cresco	58.8	19	60.8	+ 2.0	64.6	1891	54.3	1873

Departures from normal temperature—Continued.

State and station.	(1) Normal for the month of Sept.	(2) Length of record.	(3) Mean for Sept., 1892.	(4) Departure from normal.	(5) Extreme monthly mean for September.			
					Highest.	Year.	Lowest.	Year.
Kansas.	°	*Years*	°	°	°		°	
Eureka Ranch	69.9	9	67.4	− 2.5	74.3	1884	67.1	1883
Independence	70.0	20	72.4	+ 2.4	74.9	1881	66.2	1889, 1890
Salina	70.3	10	70.4	+ 0.1	77.3	1884	65.1	1890
Louisiana.								
Grand Coteau	77.4	9	75.2	− 2.2	81.6	1884	74.7	1890
Maine.								
Orono	57.0	21	57.7	+ 0.7	60.8	1891	52.4	1873
Maryland.								
Cumberland	62.3	21	64.0	+ 1.7	70.0	1881	59.3	1888
Michigan.								
Kalamazoo	62.2	16	63.0	+ 0.8	69.0	1881	55.2	1879
Missouri.								
Sedalia	69.7	8	70.5	+ 0.8	75.9	1881	64.6	1890
Montana.								
Fort Custer	58.4	13	64.8	+ 6.4	64.8	1892	54.0	1884
Nebraska.								
Fort Robinson	61.4	9	63.7	+ 2.3	67.6	1891	56.1	1886
Genoa (near)	62.8	16	65.2	+ 2.4	67.0	1891	59.9	1883
Nevada.								
Browns	69.6	20	72.2	+ 2.6	75.9	1888	64.6	1881
Carson City	60.8	15	62.5	+ 1.7	65.1	1888	55.8	1884
New Hampshire.								
Hanover	56.0	21	56.7	+ 0.7	62.9	1881	53.1	1887
New Mexico.								
Deming	76.6	10	77.7	+ 1.1	82.0	1888	73.4	1882
Fort Wingate	63.4	21	64.5	+ 1.1	67.3	1879	59.5	1886
New York.								
Cooperstown	55.6	21	56.6	+ 1.0	66.7	1881	53.9	1871
Plattsburg Barracks	59.2	21	58.3	− 0.9	65.3	1881	53.8	1888
North Carolina.								
Lenoir	65.3	20	65.4	+ 0.1	71.1	1884	55.2	1878
Oklahoma.								
Fort Reno	71.8	9	.....	.....	78.1	1884	68.4	1889
Fort Sill	72.9	21	71.3	− 1.6	77.6	1884	68.8	1882
Oregon.								
Bandon	54.4	8	54.4	0.0	57.2	1888	51.2	1886
Eola	59.5	21	59.6	+ 0.1	65.3	1876	51.2	1881
Pennsylvania.								
Dyberry	58.1	19	55.9	− 2.2	66.9	1881	51.8	1871
Grampian	60.6	21	60.5	− 0.1	72.0	1881	54.2	1871
Wellsboro	58.9	13	54.8	− 4.1	73.8	1881	52.3	1883
South Carolina.								
Statesburg	72.5	11	71.1	− 1.4	77.9	1881	69.9	1888
South Dakota.								
Fort Sully	62.1	21	67.8	+ 5.7	68.3	1891	57.3	1873
Texas.								
Austin	77.7	19	79.3	+ 1.6	83.2	1884	70.3	1887
Silver Falls	72.6	6	74.5	+ 1.9	74.8	1891	70.4	1890
Utah.								
Terrace	66.5	19	.....	.....	78.5	1888	52.0	1884
Vermont.								
Strafford	59.9	19	57.7	− 2.2	64.4	1879	56.2	1876
Virginia.								
Dale Enterprise	69.6	12	66.9	− 2.7	72.9	1886	59.9	1890
Washington.								
Fort Townsend	57.2	17	57.1	− 0.1	63.5	1874	53.9	1884
West Virginia.								
Parkersburg	66.2	11	65.0	− 1.2	.....	.....	61.9	1888
Wisconsin.								
Embarrass	60.6	21	60.0	− 0.6	65.6	1891	56.6	1873
Madison	61.2	16	61.5	+ 0.3	67.0	1891	56.6	1883
Wyoming.								
Fort Washakie	56.9	9	59.4	+ 2.5	59.9	1887	52.9	1889

YEARS OF HIGHEST MEAN TEMPERATURE FOR SEPTEMBER.

At Fort Stanton, N. Mex., Montrose, Las Animas, and Denver, Colo., Rapid City, S. Dak., Fort Buford, N. Dak., Fort Custer, Mont., and Fort Sherman, Idaho, the mean temperature for the current month was the highest ever reported for September during the respective periods of observation. The highest mean temperature for September occurred generally in north-central districts in 1891; over the Rocky Mountain and plateau regions and along the Pacific coast in 1888; in south-central districts in 1884; and generally east of the Mississippi River in 1881.

YEARS OF LOWEST MEAN TEMPERATURE FOR SEPTEMBER.

The lowest mean temperature for September occurred generally in Texas in 1889; at points on the New England and New Jersey coasts in 1888; generally over the Rocky Mountain and plateau regions and on the middle and north Pacific coasts in 1884; in the southern and eastern lake regions in 1883; in the Dakotas in 1881; in the Gulf States in 1880; from the extreme upper Mississippi valley over Upper Michigan in 1873; and generally in the middle Atlantic states in 1871.

MAXIMUM TEMPERATURE.

At Helena, Mont., the maximum temperature was as high, and at Tatoosh Island, Wash., it was higher than previously reported for September.

The highest temperature reported at a regular station of the Weather Bureau for September, 1892, was 111, at Yuma, Ariz., on the 27th. The maximum temperature was above 100 in the Sacramento, San Joaquin, Gila, and lower Colorado valleys, and was above 90 over the west part of the plateau region, in districts between the Mississippi River and the Rocky Mountains, and over Florida and southern parts of the east Gulf states and Georgia. At points on the immediate middle and extreme north Pacific coasts the maximum temperature was below 70, and along the immediate Pacific coast north of San Francisco, Cal., on the New England coast, and in northern New England the maximum readings were below 80.

Reports of voluntary observers show maximum temperature 115 to 118 in the lower valley of the Colorado River and in the Colorado Desert, Cal., respectively, and readings above 100 were noted on the middle-eastern and southeastern Rocky Mountain slopes, and at points in the plateau region south of the 40th parallel.

MINIMUM TEMPERATURE.

At Key West, Fla., the minimum temperature, 69, noted on the 27th, was the lowest temperature ever reported at that place for September.

The lowest temperature reported by a regular station of the Weather Bureau was 28, at Lander and Cheyenne, Wyo., on the 11th. The minimum temperature was 29 at Huron, S. Dak., on the 14th, and at Havre, Mont., on the 25th; 30 at Northfield, Vt., on the 21st, and at Baker City, Oregon, on the 22d; and 31 at Saint Vincent, Minn., on the 26th. The minimum values were below 40 north of a line traced from the interior of Maine over the northern lake region to Minnesota, thence to central Iowa, thence to southwestern Kansas and southern Colorado, thence to extreme northern Utah, thence to east-central California, and east of this line traced thence over western Oregon, thence eastward over the valley of the Columbia River, and thence to northwestern Washington. The minimum temperature was highest in Florida, and at points along the Texas coast, where it was above 65, and it was above 60 along the south Atlantic and Gulf coasts, and in the Gila and lower Colorado valleys.

Reports of voluntary observers show temperature below freezing in the interior of New England, New York, and Pennsylvania, and at points in the Dakotas, Nebraska, and the middle and northern Rocky Mountain and plateau regions.

RANGES OF TEMPERATURE.

The greatest daily ranges of temperature are shown in the table of miscellaneous meteorological data. The greatest monthly ranges of temperature were noted in areas in the Missouri Valley and northern Rocky Mountain region, where they exceeded 60. From the west-central and northwestern districts the monthly ranges decreased eastward to 20 on the south New England coast, southeastward to less than 30 along the south Atlantic and Gulf coasts, and westward to less than 30 on the extreme south Pacific coast, and at points along the immediate middle and north Pacific coasts.

TEMPERATURE, JANUARY TO SEPTEMBER.

For the period January 1 to September 30, 1892, the temperature averaged about normal in the middle Atlantic states, the lower lake region, the upper Mississippi valley, on the northeastern and middle-eastern slopes of the Rocky Mountains, over the southern plateau region, and along the north

Pacific coast. In New England, the upper lake region, and on the southeastern slope of the Rocky Mountains the temperature averaged less than 1 above, and in the extreme northwest and over the middle plateau region it was 1 to 2 above the average. In the west Gulf states, the Ohio Valley and Tennessee, in the Missouri Valley, and over the middle plateau region the temperature was less than 1 deficient, and in the south Atlantic and east Gulf states, at Key West, Fla., and along the south Pacific coast it was 1 to 2 below the average for the period named.

PERIODS OF HIGH TEMPERATURE.

The month opened with temperature 10 to 15 above the normal in the valley of the Red River of the North. This warm wave extended over the Lake Superior region on the 2d, and reached the Saint Lawrence Valley on the 3d. On the 5th the temperature rose rapidly on the northeast slope of the Rocky Mountains. On the 6th the warm wave extended southeastward, and the temperature was 10 to 15 above the normal in the middle Missouri valley. On the 7th and 8th the temperature changes east of the Mississippi River were slight. A warm wave which appeared over the western Saskatchewan valley on the 13th reached the middle Missouri valley on the 14th, with a 24-hour temperature rise of 12 to 18, and overspread the middle Mississippi and lower Ohio valleys on the 15th. No marked rise in temperature occurred in the eastern districts. One of the more notable warm waves of the month appeared in the Northwest on the 16th; on the 17th it occupied an area extending from the northern lake region to Kansas, with temperature 10 to 18 above the normal, and the highest temperature, 94, at Bismarck, N. Dak.; on the 18th this warm wave extended from the middle Mississippi valley over New England, and on the 19th the highest temperature of the month was reported at points on the New England coast. On the 19th a warm wave appeared over the Northwest; on the 20th the temperature was 14 to 20 above the normal in the Dakotas; on the 21st the warm wave advanced over the Lake region, and reached New England on the 22d. An important warm wave extended eastward over the middle plateau region on the 21st, occupied the middle-eastern slope of the Rocky Mountains on the 22d, with temperature 15 to 20 above the normal, and extended over the Lake region on the 23d. Attending this warm wave the highest temperature of the month was reported from the middle-eastern slope of the Rocky Mountains over the Lake region from the 22d to the 24th, and in the Southern States on the 25th and 26th. On the 24th and 25th the temperature rose over the northern Rocky Mountain and plateau regions; on the 26th the warm area extended from Colorado to Minnesota, with temperature 10 to 20 above the normal in the Red River of the North Valley; on the 27th it extended from the lower Missouri valley over the Great Lakes; and during the 28th the warm wave passed off the middle Atlantic and New England coasts. Another of the more important warm waves of the month occupied the Northwest on the 28th, with temperature 20 to 25 above the normal, and the highest maximum temperature of the month in Montana, western Wyoming, and western Colorado; on the 29th the warm wave extended over the upper lake region, with temperature 16 to 20 above the normal, and the highest temperature of the month in the middle Missouri valley and northeastern Colorado; on the 30th the warm wave extended from the middle Missouri valley over the New England and middle Atlantic states, and the temperature rose 20 to 30 in 24 hours in northern New York and northern New England.

PERIODS OF LOW TEMPERATURE.

On the 1st and 2d the temperature fell 10 to 20 below the normal in the Northwest. On the 3d the cool wave extended over the Missouri Valley, reached the western lake region on the 4th, with a 24-hour temperature fall of 14 to 24 over Upper Michigan, covered an area from the Great Lakes to the Gulf of Mexico on the 5th, with a temperature fall of 10 to 20 from Tennessee to the lower lakes, and reached the middle Atlantic and New England coasts on the 6th. On the 6th a cool wave occupied the northern plateau and Rocky Mountain regions. On the 7th the temperature fell 10 to 20 in the Missouri Valley, and the cool wave overspread the middle-eastern slope of the Rocky Mountains on the 8th. No marked fall in temperature occurred east of the Mississippi River. On the 9th the temperature was about 10 below the normal north of Montana. During the 10th the cool wave overspread the middle and lower Missouri valleys and the middle-eastern slope of the Rocky Mountains, with temperature 10 to 15 below the normal. On the 11th the cold area extended from Lake Michigan to Texas, the temperature fell 20 in southern Missouri, and the lowest temperature of the month, 28, was noted at Cheyenne and Lander, Wyo. On the 12th this cool wave occupied the middle Mississippi and lower Ohio valleys, and a second cool wave appeared in the Red River of the North Valley. On the 13th the cool wave extended from the middle Missouri valley over the western lake region and the Ohio Valley, with temperature 10 below the normal; it reached the middle Atlantic states on the 14th and New England on the 15th. Attending this cool wave and a fall in temperature which extended over the middle Missouri valley and the middle-eastern slope of the Rocky Mountains on the 15th, the lowest temperature of the month was reported between the Mississippi River and the Rocky Mountains. From the 17th to the 20th a cool wave advanced from the middle and northern plateau regions to the middle Atlantic coast. From the 17th to the 19th the lowest temperatures of the month occurred generally in California. On the 19th the temperature was 10 below the normal over the middle and northern plateau regions. On the 20th the cool wave extended over the northeastern slope of the Rocky Mountains and reached the Missouri Valley on the 21st. Slight temperature changes were caused east of the Missouri Valley. On the 22d the lowest temperature of the month, 30, was recorded at Baker City, Oregon. On the 23d a cool wave occupied the northern plateau and Rocky Mountain regions. On the 24th the temperature fell 20 to 30 in the Dakotas and Red River of the North Valley. On the 25th a temperature fall of 20 to 28 occurred in Upper Michigan. On the 26th the cool wave overspread the Ohio Valley and the lowest temperature of the month, 31, was noted at Saint Vincent, Minn., and on the 27th the cool wave reached the Atlantic coast, with the lowest temperature of the month at stations in the east-central districts. On the 27th a cool wave appeared in the Northwest; on the 28th it extended over the lower Missouri valley and the Lake region, with the lowest temperature of the month in the east Gulf and south Atlantic states, and reached the middle Atlantic and New England states on the 29th.

FROST.

The first heavy frost of the season was reported as follows: 1st, Marquette, Mich. 4th, Havre, Mont. 5th, Bismarck and Woodbridge, N. Dak. 6th, Cresco, Iowa; Neillsville, Wis. 7th, Blue Knob, Pa.; Medford, Wis. 11th, Gering, Nebr.; Sundance, Wyo. 12th, Fort Stanton, N. Mex.; Fort Stevenson, N. Dak. 13th, Ashley and Fort Buford, N. Dak.; near Rapid City, S. Dak. 14th, Alta, Atlantic, Denison, and Panama, Iowa; Moorhead, Minn.; Crete and Oakdale, Nebr.; Forman and Wild Rice, N. Dak.; Elkton, Huron, and Yankton, S. Dak. 15th, Napoleon, N. Dak. 16th, Larrabee, Iowa; Power, N. Dak.; Valley Junction, Wis. 20th, Alpena, Mich.; Malone, N. Y. 21st, Spokane, Wash. 26th, East Peoria, Ill.; Black River Falls, Wis. 27th, Philo, Ill.; Jacksonboro, Ohio. 29th, Berlin Mills, N. H.; Number Four, N. Y. 30th, Volun-

town, Conn.; Manchester, N. H. The occurrence of heavy frost was about seasonable at the several stations named.

The first light frost of the season was reported as follows: 1st, Sycamore, Ill.; Hampton, Iowa; Alpena, Cheboygan, and Grand Haven, Mich.; Rondout, N. Y.; Port Angeles, Wash.; Cadiz, Madison, and Valley Junction, Wis. 2d, Ottawa, Ill.; Cornish, Me.; Frederick, Md.; Royalston, Mass.; Thornville, Mich.; Berlin Mills, N. H.; Lowville, N. Y.; Garrettsville, Kenton, Lordstown, and North Lewisburg, Ohio; Blue Knob, Grampian, State College, and Wellsboro, Pa.; Northfield, Vt. 3d, Upper Mattole, Cal.; Vinton, Iowa; Westboro, Mass.; Helena, Mont. 4th, Fort Stevenson, N. Dak.

5th, San Jose, Cal.; Watseka, Ill.; Alta, Iowa; Rockland, Mich.; Moorhead and Saint Charles, Minn.; Fort Buford and Napoleon, N. Dak.; Huron and Rapid City, S. Dak. 6th, Chicago and Walnut, Ill.; Cedar Rapids, Delaware, near Dubuque, Independence, Iowa Falls, Monticello, and Washington, Iowa; Franklin, Ky.; Detroit, Mich.; Red Wing, Minn.; Hannibal, Mo.; Wauseon, Ohio; Black River Falls, Fond du Lac, near Green Bay, Koepenick, and Oconomowoc, Wis. 7th, Taunton, Mass.; Dyberry, Pa. 8th, Orono, Me.; East Canterbury, N. H.; Buffalo, N. Y.; Moxee, Wash.

9th, Haigler, Nebr. 11th, Denver, Colo.; Gove City, Kans.; Kimball and North Platte, Nebr. 12th, Panama, Iowa; near Allison, near Dodge City, and Downs, Kans.; Beatrice, Nebr. 13th, Corning, Larrabee, and Logan, Iowa; Morris, Minn.; Princeton, Mo.; Crete, Dunning, Norfolk, Springview, and Valentine, Nebr.; Ellendale and Power, N. Dak. 14th, at points in Arkansas; Clarinda, College Springs, Des Moines, Hopeville, Mount Ayr, Murray, Sioux City, and Storm Lake, Iowa; Horton, near Leavenworth, Manhattan, Morse, and Topeka, Kans.; Bethany, Carrollton, Clinton, Columbia, East Lynne, Excelsior Springs, Gallatin, Grovedale, Harrisonville, Kansas City, La Monte, Langdon, Oregon, Phillipsburg, Pickering, Platte River, Poplar Bluff, Rea, Springfield, Stellada, and Vermont, Mo.; Auburn, Genoa, Harvard, Lexington, Lincoln, Marquette, Oakdale, and York, Nebr.; Grafton and Seymour, N. Dak.

15th, Seneca, Kans.; Staunton, Va. 16th, Amana, Ames, Belle Plaine, Eagle Grove, Marshall, and Williams, Iowa; Grand Rapids, Mich.; Duluth, Minneapolis, and Saint Paul, Minn.; Bluefield, W. Va.; Viroqua, Wis.; Carlinsville, Ill.; Fairfield, Iowa; Mottville, Mich.; Ithaca, N. Y.; Orangeville and near Sandusky, Ohio. 19th, Geneva, N. Y.; Losee, Utah. 20th, Manistee, Mich.; Winnemucca, Nev.; Oswego and Palermo, N. Y.; Wheeler, Ohio; Burlington, Vt. 21st, New Hartford, New London, and Voluntown, Conn.; Blue Hill and Vineyard Haven, Mass.; Manchester, N. H.; Blooming Grove and Quakertown, Pa.; Levan, Utah; Hartlandt, Vt.; Pine Hill, Wash. 22d, Ericson, Nebr.

24th, Easton, Pa. 26th, Grinnell, Iowa; Saint Vincent, Minn.; Austin, Tenn. 27th, Martinsville, Olney, near Springfield, and White Hall, Ill.; Indianapolis, Lafayette, Mauzy, and near Vevay, Ind.; Harrodsburg, Lexington, Matlock, Mumfordville, Shelbyville, and South Fork, Ky.; Gordonville and Olden, Mo.; Bakersville, N. C.; Gratiot, Tiffin, and Westerville, Ohio; Big Stone Gap and Marion, Va.; Central Station, W. Va. 28th, Lexington, Va. 29th, Williamsburg, Ky.; Williamstown, Mass.; Antrim, N. H.; Washington, N. C. 30th, Arcata and Forestville, Cal.; Amherst and Leicester, Mass.; Beverly, Bridgeton, and Egg Harbor City, N. J.; New York, N. Y.; Spencer, W. Va.

Frost injurious to vegetation was reported as follows: 1st, Grand Haven, Mich., slight damage to tender shoots of tomato plants. 2d, Blue Knob, Pa. (near), tomato plants killed. 5th, Fort Buford, N. Dak., cucumber vines and potato tops slightly injured; Bismarck, N. Dak., garden vegetation damaged. 7th, Blue Knob, Pa., tender vegetation frozen. 8th, Lander, Wyo., tender plants injured. 11th, Gering, Nebr., corn and potato plants killed; Lander, Wyo., all vegetation injured. 12th, Fort Stanton, N. Mex., garden vegetables injured. 13th, Fort Buford, N. Dak., garden vegetables badly damaged. 14th, Alta, Iowa, corn in low places injured; Oakdale, Nebr., tender vegetation and corn damaged; Huron, S. Dak., late vegetation injured. 14–15th, Reynolds, N. Dak., vegetation damaged slightly. 16th, Williams, Iowa, slight damage; Fayette, Iowa, buckwheat and corn injured. 19th, Sault Ste. Marie, Mich., slight damage to garden vegetables. 20th, Alpena, Mich., considerable damage to garden vegetables. 27th, Martinsville, Ill., corn nipped.

PRECIPITATION (expressed in inches and hundredths).

The distribution of precipitation over the United States and Canada for September, 1892, as determined from reports of about 2,000 stations, is exhibited on Chart III. In the table of miscellaneous meteorological data the total precipitation and the departure from the normal are given for regular stations of the Weather Bureau. The figures opposite the names of the geographical districts in the columns for precipitation and departure from the normal show, respectively, the averages for the several districts. The normal for any district may be found by adding the departure to the current mean when the precipitation is below the normal and subtracting when above.

The September rainfall is usually greatest over eastern and southern parts of the Florida Peninsula, on the North Carolina and Texas coasts, and in extreme northwestern Washington, where it exceeds 6.00, and the normal amount exceeds 4.00 along the south Atlantic and Gulf coasts, over a great part of Mississippi, Louisiana, and eastern Texas, and in an area extending from the interior of Iowa over northern Wisconsin, Upper Michigan, and northern Lower Michigan. In the Northwest and over the Rocky Mountain and plateau regions, except in parts of the northern plateau region and in northern New Mexico, the September precipitation is less than 1.00, and generally over the western part of the plateau region and in central and southern California the normal amount for that month is less than 0.25.

In September, 1892, the monthly precipitation was greatest on the east coast of the Florida Peninsula, where it was 14.00 to 16.00, and more than 10.00 fell along the Atlantic coast from Charleston, S. C., to a point south of Jupiter, Fla., over the interior of southern Florida, and in extreme northwestern Washington. Over the greater part of the country east of the Mississippi River and along the immediate coast of Washington the monthly rainfall was 2.00 to 4.00; at Neah Bay, Wash., it was 10.91. Over the Rocky Mountain and plateau regions, in the Northwest, and on the middle and south Pacific coasts the monthly amount was less than 1.00; over the greater part of those districts less than 0.50 was reported; and in southern and southwestern California no rain fell.

DEPARTURES FROM NORMAL PRECIPITATION.

The monthly precipitation was generally deficient. Small areas of excess appeared in western Nova Scotia, on the south New England, south Atlantic, eastern Florida, and middle Gulf coasts, in central Arkansas, central Kentucky, and central Tennessee, in eastern Lower Michigan and southern Ontario, and on the north Pacific coast. The most marked de-

ficiency was noted on the Texas coast, where it was more than 6.00 at Galveston, and the deficiency was more than 3.00 on the Virginia, northern North Carolina, and western Florida coasts, and along the south shore of Lake Superior. The greatest excess in monthly precipitation occurred on the South Carolina, Georgia, and northern Florida coasts, where it was 4.00 to 6.00; the excess was more than 5.00 on the extreme northern coast of Washington, and was more than 3.00 at Port Huron, Mich.

Considered by districts the average percentage of the normal in districts where the precipitation was in excess was about as follows: North Pacific coast, 131; south Atlantic states, 119. In districts where the precipitation was deficient the percentage of the normal was about as follows: southern and middle plateau regions, 12; northeast slope of the Rocky Mountains, 28; Missouri Valley, 34; west Gulf states, 37; extreme northwest and middle-eastern slope of the Rocky Mountains, 38; southeast slope of the Rocky Mountains, 42; middle Pacific coast, 44; middle Atlantic states, 47; Key West, Fla., 55; upper lake region, 63; northern plateau region and upper Mississippi valley, 64; east Gulf states, 72; New England, 76; lower lake region, 87; Ohio Valley and Tennessee, 90.

The following table shows for certain stations, as reported by voluntary observers, (1) the average precipitation for September for a series of years; (2) the length of record during which the observations have been taken and from which the average has been computed; (3) the total precipitation for September, 1892; (4) the departure of the current month from the average; (5) and the extremes for September during the period of observation and the years of occurrence:

State and station.	(1) Average for the month of Sept.	(2) Length of record.	(3) Total for Sept., 1892.	(4) Departure from average.	(5) Extremes for September.			
					Greatest.		Least.	
					Am't.	Year.	Am't.	Year.
Arizona.	*Inches*	*Years*	*Inches.*	*Inches.*	*Inches.*		*Inches*	
Fort Apache	1.53	16	1.23	— 0.30	5.41	1881	0.30	1880
Fort Mohave.	0.06	19	0.00	— 0.06	0.42	1883	0.00	*
Whipple Barracks	1.18	21	0.14	— 1.04	4.88	1887	0.00	1874
Arkansas.								
Keesees Ferry	4.51	11	1.79	— 2.72	12.08	1890	0.33	1891
California.								
Fort Bidwell	0.34	21	0.91	+ 0.57	1.60	1890	0.00	†
Riverside a	0.09	12	.....	.....	0.71	1890	0.00	*
Colorado.								
Las Animas	0.56	10	0.04	— 0.52	1.35	1883	0.00	1890
Florida.								
Merritts Island	8.11	14	8.04	— 0.07	23.78	1878	2.88	1883
Georgia.								
Forsyth	3.48	18	3.36	— 0.12	8.69	1888	0.10	1886
Idaho.								
Boise Barracks	0.37	19	0.18	— 0.19	1.36	1882	T.	1886
Fort Sherman	0.96	8	1.26	+ 0.30	1.95	1881	0.08	1882
Illinois.								
Centralia	3.38	12	.....	.....	6.32	1890	0.74	1883
Indiana.								
Lafayette	2.37	10	1.22	— 1.15	4.64	1885	0.30	1882
Indian Territory.								
Fort Supply	2.10	11	1.15	— 0.95	4.23	1873	0.20	1886
Iowa.								
Cresco	3.95	19	1.22	— 2.73	10.03	1881	0.82	1888
Kansas.								
Independence	3.62	20	0.82	— 2.80	9.71	1884	0.27	1883
Salina	1.91	10	0.83	— 1.08	3.75	1891	0.50	1888
Louisiana.								
Grand Coteau	3.53	8	0.60	— 2.93	10.58	1885	0.37	1888
Maine.								
Orono	3.42	21	3.91	+ 0.49	6.97	1888	0.95	1887
Maryland.								
Cumberland	2.94	21	2.36	— 0.58	8.50	1882	0.40	1873
Michigan.								
Kalamazoo	3.27	16	2.42	— 0.85	6.28	1879	0.53	1882
Missouri.								
Sedalia	4.76	11	4.01	— 0.75	10.54	1884	0.68	1891
Montana.								
Fort Custer	0.81	13	0.34	— 0.47	1.72	1890	0.03	1879
Nebraska.								
Fort Robinson	0.53	8	0.28	— 0.25	1.52	1891	0.00	1890
Genoa (near)	3.15	16	0.81	— 2.34	11.34	1887	0.29	1888
Nevada.								
Browns	0.09	21	0.00	— 0.09	0.87	1891	0.00	*
Carson City	0.26	15	0.26	0.00	1.01	1890	0.00	†
New Hampshire.								
Hanover	2.96	21	1.72	— 1.24	6.46	1882	0.27	1884

Departures from average precipitation—Continued.

State and station.	(1) Average for the month of Sept.	(2) Length of record.	(3) Total for Sept., 1892.	(4) Departure from average.	(5) Extremes for September.			
					Greatest.		Least.	
					Am't.	Year.	Am't.	Year.
New Mexico.	*Inches.*	*Years*	*Inches.*	*Inches.*	*Inches.*		*Inches*	
Deming	1.63	10	0.08	— 1.55	4.36	1886	0.08	1892
Fort Wingate	1.29	20	0.04	— 1.25	3.60	1873	0.04	1892
New York.								
Cooperstown	3.33	21	3.57	+ 0.24	7.24	1890	1.17	1871
Plattsburg Barracks	2.64	21	1.68	— 0.96	4.72	1882	0.51	1887
North Carolina.								
Lenoir	4.14	20	5.90	+ 1.76	8.50	1878	0.40	1871
Oklahoma.								
Fort Reno	3.05	9	1.93	— 1.12	5.13	1887	1.17	1891
Fort Sill	2.63	21	3.57	+ 0.94	5.60	1874	0.28	1879
Oregon.								
Bandon	1.87	14	1.30	— 0.57	5.12	1884	0.00	1890
Eola	1.59	21	1.81	+ 0.22	6.57	1884	0.00	1873, 1890
Pennsylvania.								
Dyberry	2.84	20	2.10	— 0.74	6.49	1888	1.04	1885
Grampian	3.33	15	2.12	— 1.21	5.87	1890	1.14	1885
Wellsboro	3.45	13	1.18	— 2.27	8.40	1880	1.18	1892
South Carolina.								
Statesburg	3.55	11	2.88	— 0.67	6.67	1884	0.75	1887
South Dakota.								
Fort Sully	0.95	21	0.53	— 0.42	4.09	1876	T.	1871
Texas.								
Austin	4.52	20	.....	.....	12.33	1886	0.00	1872
Silver Falls	2.05	6	1.73	— 0.32	5.58	1886	0.27	1888
Utah.								
Terrace	0.25	20	.....	.....	1.61	1884	0.00	*
Vermont.								
Strafford	3.57	19	1.55	— 2.02	6.30	1880	0.70	1884
Virginia.								
Dale Enterprise	4.19	12	2.97	— 1.22	12.24	1882	1.04	1885
Washington.								
Fort Townsend	1.27	17	0.66	— 0.61	5.79	1874	0.15	1890
West Virginia.								
Parkersburg	3.60	7	2.79	— 0.81	8.41	1890	1.72	1891
Wisconsin.								
Embarrass	4.29	21	3.00	— 1.29	11.60	1881	0.37	1871
Madison	3.18	20	3.29	+ 0.11	8.17	1881	0.38	1891
Wyoming.								
Fort Washakie	0.36	10	0.00	— 0.36	0.92	1891	0.00	1892

*Generally. †Frequently.

PRECIPITATION, JANUARY TO SEPTEMBER.

For the period January to September, 1892, inclusive, the precipitation averaged about normal in the middle Atlantic and east Gulf states, the Ohio Valley and Tennessee, the upper lake region, the extreme northwest, in the Missouri Valley, on the northeastern and middle-eastern slopes of the Rocky Mountains, and over the middle plateau region. In the lower lake region and the upper Mississippi valley the precipitation was about two-tenths greater than usual, and in New England, the south Atlantic and west Gulf states, on the southeast slope of the Rocky Mountains, over the southern and northern plateau regions, and along the Pacific coast the precipitation was eight-tenths to nine-tenths of the normal amount for the period named.

YEARS OF GREATEST PRECIPITATION FOR SEPTEMBER.

The greatest precipitation for September was noted at points in western Kansas, northern New Mexico, southeastern Wyoming, western Colorado, and extreme northwestern Washington in 1891; in South Carolina and eastern Georgia in 1890; from the middle Mississippi valley to southern Lower Michigan in 1886; in the valley of the lower Columbia River in 1884; from the middle Missouri valley to Lake Superior in 1881; and from western Pennsylvania to the Virginia and North Carolina coasts in 1876.

YEARS OF LEAST PRECIPITATION FOR SEPTEMBER.

At Wellsboro, Pa., Galveston and San Antonio, Tex., Santa Fe, Deming, and Fort Wingate, N. Mex., Concordia, Kans., Denver and Montrose, Colo., and Fort Washakie, Wyo., the precipitation for the current month was the least ever reported for September during the respective periods of observation. The least precipitation for September was noted on the north Pacific coast in 1890; over the northern plateau region and from eastern Texas to the middle Missouri valley

in 1888; in the Red River of the North Valley and on the North Carolina coast in 1887; along the New England and middle Atlantic coasts in 1884; along the east Gulf coast in 1883; from the middle Missouri valley to western Lake Superior in 1882; and in the lower lake region in 1871 and 1877. In the last 21 years there have been 8 Septembers without rain at San Diego, Cal.; 6 at Los Angeles, Cal.; 5 at Red Bluff and Sacramento, Cal.; 4 at Winnemucca, Nev., and San Francisco, Cal.; 3 at Yuma, Ariz.; and 2 at Cheyenne, Wyo.

EXCESSIVE PRECIPITATION.

The following tables show, by states, the number of stations reporting monthly precipitation to equal or exceed 10.00; precipitation to equal or exceed 2.50 in 24 hours; and precipitation to equal or exceed 1.00 in 1 hour in September, 1892:

Monthly precipitation to equal or exceed 10.00.

State.	Number of stations.	State.	Number of stations.
Florida	12	Washington	2
South Carolina	3	North Carolina	1
Georgia	2	Oregon	1

Precipitation to equal or exceed 2.50 *in* 24 *hours.*

State.	Number of stations.	Dates.	State.	Number of stations.	Dates.
Michigan	16	12, 12–13, 13, 13–14.	Tennessee	4	2, 4–5, 9, 13.
Georgia	12	6, 11–12, 12–13, 13, 17–19, 20–22, 21–22, 22.	Louisiana	3	5, 12.
			Ohio	3	13.
Alabama	9	4–5, 12–13, 18, 18–19, 19, 19–20.	Illinois	2	10, 10–11.
			Iowa	2	8–9, 10, 11.
Arkansas	8	11, 11–12, 12.	Massachusetts	2	14–15.
Missouri	8	10, 10–11, 27–28, 28.	New Hampshire	2	13–14, 15.
Florida	7	1, 11, 15–16, 16, 16–17, 22, 29–30.	New York	2	15–16, 24.
			Texas	2	10–11, 11–12.
Kentucky	7	11–12, 12, 12–13, 13.	Virginia	2	13, 20–21.
South Carolina	7	2, 12, 17–18, 18–19, 19, 22.	Washington	2	24–25.
			Kansas	1	4.
Indiana	5	12–13, 13.	Maryland	1	13–14.
Maine	5	14–15.	Minnesota	1	—
North Carolina	5	12–13, 13, 18–19, 20–21, 20–22, 21–22.	Nebraska	1	20.
			Oregon	1	22.
			Pennsylvania	1	13–14.
Mississippi	4	4–5, 5, 12.	West Virginia	1	13.
			Wisconsin	1	9.

Precipitation to equal or exceed 1.00 *in* 1 *hour.*

State.	Number of stations.	Dates.	State.	Number of stations.	Dates.
Florida	11	2, 7, 11, 12, 16, 17, 18, 20, 21, 22.	Arizona	1	6.
			Kentucky	1	4.
Georgia	4	1, 20, 22.	Louisiana	1	24.
Texas	3	3, 4, 9.	Maryland	1	13–14.
Mississippi	2	4–5, 5.	Nebraska	1	20.
Tennessee	2	8, 9.	North Carolina	1	20.
West Virginia	2	22.	Wisconsin	1	22.
Alabama	1	18.			

Table of excessive precipitation, September, 1892.

State and station.	Monthly rainfall to inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
Alabama.	*Inches.*	*Inches.*		*Inches*	*h. m.*	
Bessemer		4.18	19			
Cordova		3.12	18–19			
Daphne				1.80	1 00	18
Decatur *b*		2.50	19			
Jasper		3.15	18			
Lynn		2.60	4–5			
Maysville		4.80	19			
Mobile		3.35	12–13			
Union Springs *b*		2.67	12–13			
Valley Head		3.10	19–20			

Table of excessive precipitation—Continued.

State and station.	Monthly rainfall to inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
Arizona.	*Inches.*	*Inches.*		*Inches*	*h. m.*	
Fort Apache				1.20	0 35	6
Arkansas.						
Camden *b*		2.50	12			
Dallas		3.62	11			
Little Rock		3.50	11–12			
Lonoke		6.12	11			
Madison		2.93	12			
Newport *b*		2.75	12			
Pine Bluff		3.46	12			
Searcy		2.80	11–12			
Florida.						
Amelia	10.35	3.00	22			
Avon Park	10.01			1.18	1 00	21
Brooksville				1.37	1 00	3
Eustis				1.23	0 25	12
Federal Point	13.51					
Gainesville				1.25	0 40	18
Do				1.00	0 30	22
Green Cove Springs	15.83	2.72	11			
Homeland		2.66	16	1.07	1 05	18
Hypoluxo	17.34	3.25	9	1.78	1 20	7
Do		5.00	15–16			
Jacksonville	14.04			1.35	1 00	7
Jupiter	14.43	4.20	16–17	1.05	1 00	2
Do				1.10	1 00	16
Key West				1.06	1 00	23
Kissimmee City	13.66					
Myers	13.66					
Ocala	15.56	2.80	1			
Saint Francis Barracks	14.50					
Saint Petersburg				1.53	1 10	7
Do				2.39	1 30	17
Titusville	16.67	3.20	16	2.00	1 30	11
Do		2.86	29–30	1.08	0 45	20
Georgia.						
Augusta		3.22	21–22	1.68	1 00	22
Dahlonega		3.08	12–13			
Darien	20.05	9.87	17–19			
Elberton		3.43	6			
Gainesville		2.52	12–13			
Louisville		2.95	22	2.00	0 25	22
Lumpkin		3.61	12–13			
Marietta		2.67	12–13			
Milledgeville		3.02	13			
Millen		5.20	20–22			
Newnan		2.76	13			
Piscola				2.00	2 00	1
Savannah	10.95	3.18	11–12	1.00	1 00	20
Illinois.						
Walnut		3.18	10			
Warsaw		2.50	10–11			
Indiana.						
Degonia Springs		4.75	12–13			
Huntingburg		6.00?	13			
Marion		4.55	12–13			
New Albany		2.84	13			
Point Isabel		2.75	13			
Iowa.						
Dubuque		2.57	8–9			
Keokuk		2.66	10–11			
Kansas.						
Rome		2.77	4			
Kentucky.						
Bowling Green		2.50	13			
Central City		2.86	12–13			
Earlington		3.03	12–13			
Franklin		2.52	11–12	2.00	0 30	4
Grand Rivers		2.83	12			
Pellville		2.73	13			
Princeton		2.66	12–13			
Louisiana.						
Emilie		3.00	12			
Farmerville		3.70	12			
Maurepas		4.70	5			
Sugar Experiment Station				1.71	1 30	24
Maine.						
Houlton		2.50	14–15			
Kents Hill		3.33	14–15			
Lewiston		2.62	14–15			
Mayfield		4.02	14–15			
Orono		3.00	14–15			
Maryland.						
Frederick		4.53	13–14	4.07	4 00	13–14
Massachusetts.						
Ashland		2.62	14–15			
North Billerica		2.60	14–15			
Michigan.						
Adrian		2.75	12			
Ann Arbor		2.86	13			
Birmingham		4.40	13–14			
Brown City		2.60	13			
Clinton		3.10	13			
Detroit		2.75	12–13			
Grape		2.94	13			
Hanover		2.55	13			
Jeddo		3.38	13			
Madison		4.79	13			
Port Huron		2.92	12–13			
Rawsonville		3.50	13			
Sand Beach		2.80	13			
Thornville		3.08	13			

Table of excessive precipitation—Continued.

State and station.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
Michigan—Continued.	*Inches.*	*Inches.*		*Inches*	*h. m.*	
Washington	.....	3.34	13	.....	.....	.....
Ypsilanti	.....	4.18	13	.....	.....	.....
Minnesota.						
Northfield	.....	2.75	?	.....	.....	.....
Mississippi.						
Greenville	.....	6.68	4-5	6.68	6 30	4-5
Macon	.....	.....	.....	2.00	2 00	5
Okolona	.....	3.90	5	.....	.....	.....
Pontotoc	.....	6.82	12	.....	.....	.....
Waynesboro *b*	.....	2.88	5	.....	.....	.....
Missouri.						
Fulton	.....	2.71	10	.....	.....	.....
Glasgow	.....	2.86	27-28	.....	.....	.....
Independence	.....	2.80	10	.....	.....	.....
Louisiana Bridge	.....	2.80	10-11	.....	.....	.....
Mexico	.....	2.75	10	.....	.....	.....
Stellada	.....	2.52	28	.....	.....	.....
Wellsville	.....	3.00	10-11	.....	.....	.....
Wheatland	.....	2.65	27-28	.....	.....	.....
Nebraska.						
Hayes Center	.....	3.13	20	3.13	3 00	20
New Hampshire.						
Mount Washington	.....	2.76	13-14	.....	.....	.....
North Conway	.....	3.41	14-15	.....	.....	.....
New York.						
Utica	.....	2.50	24	.....	.....	.....
West Point	.....	3.53	15-16	.....	.....	.....
North Carolina.						
Columbus	15.74	6.10	13	.....	.....	.....
Do	.....	6.94	21-22	.....	.....	.....
Horse Cove	.....	5.83	12-13	.....	.....	.....
Lenoir	.....	4.50	20-22	.....	.....	.....
Newbern	.....	3.05	18-19	.....	.....	.....
Wilmington	.....	4.23	20-21	3.64	2 11	20
Ohio.						
Hedges	.....	2.77	13	.....	.....	.....
Montpelier	.....	3.22	13	.....	.....	.....
Wauseon	.....	2.59	13	.....	.....	.....
Oregon.						
Glenora	10.27	5.58	22	.....	.....	.....
Pennsylvania.						
Aqueduct	.....	3.70	13-14	.....	.....	.....
South Carolina.						
Allendale	.....	4.13	19	.....	.....	.....
Batesburg	.....	4.12	22	.....	.....	.....
Charleston	11.77	2.72	17-18	.....	.....	.....
Green Pond	12.84	2.70	19	.....	.....	.....
Hardeeville	.....	2.76	2	.....	.....	.....
Port Royal	14.95	3.06	12	.....	.....	.....
Do	.....	3.33	18-19	.....	.....	.....
Do	.....	4.25	22	.....	.....	.....
Saint Stephens	.....	2.60	13	.....	.....	.....
Tennessee.						
Bethel Springs	.....	3.26	13	.....	.....	.....
Charleston	.....	3.99	9	3.99	3 00	9
Nashville	.....	.....	.....	1.03	1 01	8
Nunnelly	.....	3.12	4-5	.....	.....	.....
Waynesboro	.....	2.75	20	.....	.....	.....
Texas.						
Childress	.....	.....	.....	1.25	0 40	4
Forestburg	.....	.....	.....	1.00	1 00	3
Hallettsville	.....	.....	.....	1.74	1 00	9
Quanah	.....	2.50	10-11	.....	.....	.....
Tyler	.....	5.99	11-12	.....	.....	.....
Virginia.						
Clarksville	.....	2.81	20-21	.....	.....	.....
Stanardsville	.....	3.20	13	.....	.....	.....
Washington.						
Neah Bay	10.91	3.05	24-25	.....	.....	.....
Tatoosh Island	10.19	2.90	24-25	.....	.....	.....
West Virginia.						
Davis	.....	.....	.....	1.53	0 50	22
Grafton	.....	.....	.....	1.00	1 00	22
Harpers Ferry	.....	2.56	13	.....	.....	.....
Wisconsin.						
Green Bay	.....	.....	.....	1.09	1 00	22
Juneau	.....	3.27	9	.....	.....	.....

Received too late for publication in August, 1892.

Indiana.						
Marion	.....	.....	.....	1.28	1 00	19
Missouri.						
Rolla	.....	3.20	9	.....	.....	.....
New York.						
Rondout	.....	5.89	25-26	.....	.....	.....

MAXIMUM RAINFALL IN ONE HOUR OR LESS.

The following table is a record of the heaviest rainfall during September, 1892, for periods of five and ten minutes and one hour, as reported by regular stations of the Weather Bureau furnished with self-registering gauges:

Maximum rainfall in one hour or less.

Station.	Maximum fall in—					
	5 min.	Date.	10 min.	Date.	1 hour.	Date.
	Inch.		*Inch.*		*Inch.*	
Atlanta, Ga	0.17	13	0.24	13	0.90	13
Bismarck, N. Dak	0.02	8	0.03	8	0.13	8
Boston, Mass	0.08	14	0.10	14, 26	0.40	14
Buffalo, N. Y	0.11	15	0.15	10	0.21	10
Cincinnati, Ohio	0.25	4	0.40	4	0.55	4
Chicago, Ill	0.02	10	0.04	10	0.17	10
Cleveland, Ohio	0.21	10	0.22	10	0.34	5
Denver, Colo	.....	.....	.....	.....	.....	.....
Detroit, Mich	0.17	4	0.24	4	0.35	13
Dodge City, Kans	0.34	3	0.58	3	0.89	3
Duluth, Minn	0.03	9	0.05	9	0.10	9
Eastport, Me	0.04	26	0.08	26	0.23	15
Galveston, Tex	.....	.....	.....	.....	0.12	24
Indianapolis, Ind	0.25	19	0.30	19	0.38	19
Jacksonville, Fla	0.54	14	0.59	14	1.35	7
Jupiter, Fla	0.30	2	0.55	2	1.10	16
Kansas City, Mo	0.25	10	0.33	10	0.72	4
Key West, Fla	0.24	23	0.45	23	1.06	23
Marquette, Mich	0.03	9	0.05	9	0.13	9
Memphis, Tenn	0.30	4	0.40	4	0.41	4
Milwaukee, Wis	0.02	7	0.04	7	0.20	7
New Orleans, La	0.20	4	0.29	4	0.63	4
New York, N. Y	0.20	14	0.37	14	0.52	14
Norfolk, Va	0.35	25	0.60	25	0.76	25
Philadelphia, Pa	0.31	14	0.43	14	0.65	14
Philadelphia Water Works	0.17	14	0.34	14	0.89	14
Pittsburg, Pa†	.....	.....	.....	.....	.....	.....
Portland, Oregon†	.....	.....	.....	.....	.....	.....
Saint Louis, Mo	0.05	4	0.07	4	0.22	4
Saint Paul, Minn	0.09	8	0.15	8	0.40	8
Salt Lake City, Utah*	.....	.....	.....	.....	.....	.....
San Diego, Cal*	.....	.....	.....	.....	.....	.....
San Francisco, Cal*	.....	.....	.....	.....	.....	.....
Savannah, Ga	0.25	12	0.42	6	1.00	20
Tampa, Fla	0.20	2	0.32	30	0.56	29
Washington, D. C	0.20	23	0.30	23	0.60	14
Wilmington, N. C	0.47	20	0.74	20	2.07	20

* Less than 0.05 in 1 hour. †Self-register out of order.

The following tables show the number of years for which monthly precipitation to equal or exceed 10.00 inches, daily precipitation to equal or exceed 2.50 inches, and hourly precipitation to equal or exceed 1.00 inch has been reported in the several states and territories for September during the last 22 years:

Excessive monthly precipitation.

State.	No. years noted.	State.	No. years noted.
Florida	20	Arkansas	1
Texas	13	Connecticut	1
North Carolina	11	District of Columbia	1
Georgia	9	Illinois	1
Iowa	8	Indian Territory	1
New Hampshire	6	Kentucky	1
Alabama	6	Maryland	1
Louisiana	6	Minnesota	1
Kansas	5	Oregon	1
Mississippi	5	Vermont	1
Virginia	5	Arizona	0
South Carolina	5	California	0
Indiana	4	Colorado	0
Massachusetts	4	Tennessee	0
Nebraska	4	Maine	0
New Jersey	4	West Virginia	0
Pennsylvania	4	The Dakotas	0
Missouri	3	New Mexico	0
Wisconsin	3	Idaho	0
Washington	3	Montana	0
Ohio	2	Nevada	0
Delaware	2	Rhode Island	0
Michigan	2	Utah	0
New York	2	Wyoming	0

Excessive daily precipitation (24 hours).

North Carolina	20	Louisiana	11
Texas	19	Wisconsin	10
Florida	18	Connecticut	9
Georgia	16	The Dakotas	8
Mississippi	16	Pennsylvania	8
South Carolina	16	New Jersey	8
Kansas	14	Kentucky	8
Virginia	14	Minnesota	8
Illinois	13	Nebraska	8
Iowa	13	New York	8
Tennessee	13	Indiana	8
Alabama	13	Maryland	8
Michigan	12	Massachusetts	7
Missouri	12	Indian Territory	6
Arkansas	12	New Hampshire	5
Ohio	11	District of Columbia	4

Excessive daily precipitation—Continued.

State.	No. years noted.	State.	No. years noted.
Oregon	4	Delaware	1
West Virginia	4	Montana	1
Vermont	3	New Mexico	1
Maine	3	Rhode Island	1
Washington	3	Idaho	0
Arizona	2	Nevada	0
California	1	Utah	0
Colorado	1	Wyoming	0

Excessive hourly precipitation.

Texas	16	Missouri	2
Florida	14	Minnesota	2
Georgia	11	New Hampshire	2
Nebraska	10	Wisconsin	2
North Carolina	8	The Dakotas	1
Illinois	7	District of Columbia	1
Kansas	6	Maine	1
New York	6	Massachusetts	1
Tennessee	6	New Jersey	1
Louisiana	6	Vermont	1
South Carolina	5	Connecticut	1
Alabama	5	Maryland	1
Iowa	4	California	0
Michigan	4	Colorado	0
Pennsylvania	4	Delaware	0
Arizona	4	Idaho	0
Mississippi	4	Montana	0
Ohio	3	Nevada	0
Indian Territory	3	New Mexico	0
Virginia	3	Oregon	0
Kentucky	3	Rhode Island	0
West Virginia	3	Utah	0
Arkansas	2	Washington	0
Indiana	2	Wyoming	0

The following tables give exceptionally heavy monthly, daily, and hourly precipitation reported for September during the last 22 years:

Monthly.

Station and state.	Am't.	Year.	Station and state.	Am't.	Year.
	Inches.			*Inches.*	
Brownsville Tex	30.57	1886	Mayport, Fla	23.24	1885
Saint Marys, Ga	27.41	1885	Brunswick, Ga	22.08	1885
Elsworth, N. C	26.50	1881	Homeland, Fla	21.15	1890
Galveston, Tex	26.01	1885	Jacksonville, Fla	21.12	1878
Paterson, N. J	25.98	1882	Spartanburg, S. C	20.44	1888
Biscayne, Fla	25.10	1878	Wilmington, N. C	20.10	1877
Saint Augustine, Fla	23.90	1871	Darien, Ga	20.05	1892
Merritts Island, Fla	23.78	1878			

Daily (24 hours).

Station and state.	Amount.	Date.	Station and state.	Amount.	Date.
	Inches.			*Inches.*	
Paterson, N. J	17.90	21-24, 1882	Columbus, N. C	6.94	21-22, 1892
Elsworth, N. C	13.00	15-16, 1881	Homeland, Fla	6.85	1, 1890
Genoa, Nebr	10.60	1, 1887	Pontotoc, Miss	6.82	12, 1892
Darien, Ga	9.87	17-19, 1892	Greenville, Miss	6.68	4-5, 1892
Mayport, Fla	9.52	21, 1885	Milledgeville, Ga	6.50	28, 1890
Luling, La	9.32	20-21, 1891	South Canisteo, N. Y	6.48	10, 1890
Merritts Island, Fla	9.09	9, 1878	Columbia, Tex	6.47	10-11, 1890
Brownsville, Tex	8.50	21, 1887	Hot Springs, Ark	6.45	22-23, 1890
Greenwood, S. C	8.35	10, 1888	Lonoke, Ark	6.12	11, 1892
Nashua, Iowa	8.22	25, 1880	Columbus, N. C	6.10	13, 1892
Key West, Fla	7.90	21-22, 1889	Brazoria, Tex	6.03	24, 1891
College Station, Tex	7.84	4, 1889	Huntingburg, Ind	6.00?	13, 1892
Jesup, Ga	7.82	27, 1885	Tyler, Tex	5.99	11-12, 1892
Sedan, Kans	7.52	10-11, 1889	Horse Cove, N. C	5.83	12-13, 1892
South Fork, Ky	7.50	17-18, 1889	Minden, La	5.72	22, 1890
South Orange, N. J	7.50	23, 1882	Glenora, Oregon	5.58	22, 1892
Mt. Washington, N. H.	7.41	15, 1880	Midland, Tex	5.50	29-30, 1891
Abbeville, S. C	7.40	10, 1888	Charleston, S. C	5.42	24-25, 1890
Wilmington, N. C	7.30	10, 1883	Wedgwood, N. Y	5.34	10, 1890
Wytheville, Va	7.02	12, 1878	New Braunfels, Tex	5.27	8, 1890
Mobile, Ala	7.00	18, 1877	Centerville, Mo	5.20	8-9, 1890
Fort Hays, Kans	7.00	12, 1871	Brewer Mine, S. C	5.20	13-14, 1890
Shreveport, La	7.00	17, 1875	Millen, Ga	5.20	20-22, 1892
Portsmouth, N. C	7.00	12, 1884	Hypoluxo, Fla	5.20	15-16, 1892

One hour and less.

Station and state.	Amount.	Time.	Date.
	Inches.	*h. m.*	
Demos, Ohio	2.00	0 05	5, 1890
Jacksonville, Fla	0.62	0 05	6, 1891
Do	0.54	0 05	14, 1892
Wilmington, N. C	0.47	0 05	20, 1892
Key West, Fla	0.45	0 05	20, 1891
Jupiter, Fla	0.40	0 05	8, 1891
Galveston, Tex	0.38	0 05	16, 1891
New York, N. Y	0.35	0 05	17, 1890
Savannah, Ga	0.35	0 05	12, 1890
Do	0.35	0 05	24, 1890
Norfolk, Va	0.35	0 05	25, 1892
Dodge City, Kans	0.34	0 05	3, 1892
Norfolk, Va	0.32	0 05	14, 1890
Philadelphia, Pa	0.31	0 05	14, 1892
Jupiter, Fla	0.30	0 05	2, 1892
Memphis, Tenn	0.30	0 05	4, 1892
Jupiter, Fla	0.30	0 05	5, 1890
Washington, D. C	0.30	0 05	11, 1890
Cincinnati, Ohio	0.25	0 05	4, 1892
Indianapolis, Ind	0.25	0 05	19, 1892
Kansas City, Mo	0.25	0 05	10, 1892
Savannah, Ga	0.25	0 05	12, 1892
New York, N. Y	0.45	0 08	21, 1882
Kirkwood, S. C	1.50	0 10	14, 1890
Jacksonville, Fla	1.18	0 10	6, 1891
Pine Apple, Ala	1.10	0 10	5, 1890
Wilmington, N. C	0.74	0 10	20, 1892
Norfolk, Va	0.60	0 10	25, 1892
Jacksonville, Fla	0.59	0 10	14, 1892
Dodge City, Kans	0.58	0 10	3, 1892
Jupiter, Fla	0.55	0 10	2, 1892
Alpena, Mich	1.05	0 11	10, 1884
Omaha, Nebr	1.00	0 15	28, 1881
Howe, Texas	3.00	0 20	10, 1889
Emilie, La	1.24	0 20	3, 1891
Fort Riley, Kans	1.07	0 20	15, 1870
Louisville, Ga	2.00	0 25	22, 1892
Franklin, Ky	2.00	0 30	4, 1892
Charleston, S. C	2.00	0 30	13, 1877
Cedar Keys, Fla	1.70	0 30	2, 1888
Rio Grande City, Tex	1.93	0 35	26, 1879
Monroe, La	4.12	0 45	22, 1890
Fort Davis, Tex	2.42	0 45	9, 1880
Fort Meade, Fla	3.50	1 00	6, 1891
Luling, La	9.32	4 10	20-21, 1891

SNOW (in inches and tenths).

Snow fell at Mount Washington, N. H., on the 6th, 7th, 26th, and 27th, the total depth for the month measuring 4. Snow fell in the mountains near Lander, Wyo., and Baker City, Oregon, on the 23d. Snow was reported at Fort Yellowstone, Wyo., on the 24th. A light flurry of snow occurred at Middletown, Conn., on the 27th.

HAIL.

Description of the more severe hailstorms of the month is given under "Local storms." Hail was reported as follows: 2d, Colorado. 3d, Colorado, Kansas, and Nebraska. 4th, New Mexico. 6th, Arizona and South Dakota. 7th, Iowa, Missouri, and Nebraska. 8th, Colorado, Iowa, Kansas, Nebraska, South Dakota, and Tennessee. 9th, Illinois, Indiana, Iowa, Louisiana, Michigan, Minnesota, Missouri, and South Dakota. 10th, Colorado, Illinois, Iowa, Kansas, Missouri, Nebraska, New Mexico, Ohio, Pennsylvania, South Dakota, Washington, and Wisconsin. 12th, Washington: 14th, Indiana and Ohio. 15th, Ohio. 20th, Kansas, Kentucky, and Nebraska. 21st, Iowa and Nebraska. 22d, Iowa. 23d, Oregon and Washington. 24th, New York and Pennsylvania. 25th, California, Delaware, Indiana, Maryland, Michigan, New Jersey, New York, Ohio, and Pennsylvania. 26th, California, Georgia, Massachusetts, New York, and Vermont. 27th, Missouri, Nebraska, and Pennsylvania. 28th, Illinois, Iowa, and Missouri. 29th, Idaho and Texas. 30th, Utah.

WINDS.

The prevailing winds for September, 1892, are shown on Chart II by arrows flying with the wind. In New England and on the northeastern slope of the Rocky Mountains the winds were generally from southwest to northwest; in the middle and south Atlantic and Gulf states, over the Florida Peninsula, and in the Ohio Valley and Tennessee, from northeast to southeast; in the lower lake region, in the upper lake region, except in Upper Michigan, in the upper Mississippi valley, and over the plateau region, from southeast to southwest; in Upper Michigan, from the northwest; in the extreme northwest, from west to north; in the Missouri Valley and on the middle-eastern slope of the Rocky Mountains, from southeast to south; on the southeastern slope of the Rocky Mountains, from south to west; on the north Pacific coast, westerly; on the middle and south Pacific coasts, from west to north; in the central valleys of California, from southeast to south.

HIGH WINDS (in miles per hour).

Wind velocities of 50 miles, or more, per hour were reported at regular stations of the Weather Bureau as follows: 5th, 60, s., at Fort Canby, Wash. 10th, 50, n., at Amarillo, Tex. 13th, 54, nw., at Cleveland, Ohio, 22d, 24th, and 25th, 60, s., at Fort Canby, Wash. 26th, 52, sw., at Woods Holl, Mass.; 51, nw., at Oswego, N. Y. 27th, 100, nw., at Mount Washington, N. H.

LOCAL STORMS.

3d.—At Dodge City, Kans., a heavy thunderstorm prevailed during the afternoon and evening; two houses were struck, two persons were stunned, and telegraph wires were burned out by lightning.

6th.—During a heavy thunderstorm in the evening a building was struck by lightning at Bismarck, N. Dak.

7th.—In the early morning a man was killed by lightning near Marshall, Iowa. A barn was struck by lightning and burned at Cadiz, Wis.

8th.—A sudden and severe thunder and wind squall in the evening caused some damage about Homer, La. At Nashville, Tenn., a heavy rain and thunder storm, with hail, began 4.12 p. m. and continued one hour; lightning struck in several places, and 2 persons were stunned by lightning.

9th.—A violent thunder, wind, and rain storm visited Marion, Ind., in the evening; a large building was destroyed, killing 2 persons. Severe thunderstorms occurred in southern Wisconsin in the morning. During a thunderstorm at Sparta, Wis., in the early morning some damage was caused by lightning. At Red Wing, Minn., a thunderstorm began 6.30 p. m., 9th, and ended during the early morning of the 10th; at 10.28 p. m., 9th, the wind reached a velocity of 42 miles per hour, and small hail fell. The heaviest thunderstorm of the season was reported at Dubuque, Iowa, in the early morning; the storm appeared to hover over that locality about 4 hours, no decided movement being noted; commencing at 3 a. m. hail about the size of walnuts fell for 15 minutes, covering the ground to a depth of 6 inches, in places; corn was severely damaged, and several buildings were struck by lightning.

10th.—At Alfred Center, N. Y., a barn was struck by lightning and burned. Damage by lightning was reported in western New York, northern Ohio, and northern Illinois. At 3 a. m. a heavy thunder, rain, and hail storm moved eastward over Madison, Wis.; tobacco was damaged. During a thunderstorm in the early morning at La Crosse, Wis., the wind reached a velocity of 36 miles per hour, and several houses were struck by lightning. Severe thunder and rain storms occurred at Davenport, Iowa., in the afternoon and evening. Thunder and rain storms caused considerable damage in central Missouri. At Yates Center, Kans., a barn was struck and stock killed by lightning.

13th.—High southeast winds prevailed on Long Island Sound and heavy wind caused damage in New York. At Blue Knob, Pa., the wind reached an estimated velocity of 50 to 60 miles per hour in the afternoon, attended by heavy rain. Damage was caused about Ashland, Va., by a thunderstorm. Wind and rain damaged property and crops about Petersburg, Va. Four persons were reported killed by a severe storm at Halifax, N. C. A destructive local storm moved northeast over Newberry county, S. C., in the afternoon; the path of the storm was about 300 yards in width and 10 miles in length, and its passage was attended by destruction of property and crops. Heavy gales prevailed over the Great Lakes, causing damage of a minor character. At Cleveland, Ohio, the wind reached a velocity of 54 miles per hour from the northwest.

14th.—Hard gales continued over Long Island Sound. At Buffalo, N. Y., the wind reached a velocity of 48 miles per hour from the southwest at 2.45 p. m. A heavy thunder and rain storm moved northeast over Petersburg, Va,, at 12.30 a. m.; 2 persons were drowned, and property was destroyed to the estimated value of $1,500.

20th.—A heavy rainstorm, with some thunder and lightning, visited Wilmington, N. C., in the morning; 4.14 inches of rain fell in 6 hours, damaging property and flooding streets.

21st.—Heavy hailstorms were reported in the afternoon in northern and northeastern Nebraska.

22d.—A severe thunderstorm prevailed at Manistee, Mich., from 9 to 11.30 p. m. During the storm a small tornado moved east-northeast south of the Weather Bureau station, damaging property to the estimated value of $10,000. In the early morning a barn 5 miles south of Cresco, Iowa, was struck by lightning and burned.

23d.—In the afternoon a cloudburst caused considerable damage in the northern part of Lancaster county, Pa. At Port Huron, Mich., a heavy thunderstorm began in the early morning and ended 8.30 a. m.; the city hall building was struck by lightning, and a number of trees were blown down.

24th.—Destructive local storms were reported in Connecticut; some damage was caused by lightning. Severe storms were reported in central New York. At Gloversville, N. Y., a mill, valued with contents at $25,000, was struck by lightning and burned.

25th.—At North Hammond, N. Y., a thunderstorm, with hail and heavy rain, occurred in the evening; lightning struck in several places, and at Ogdensburg a steamer was struck by lightning and burned. A severe thunderstorm from the west prevailed at Ithaca, N. Y., from 9.30 to 10.30 p. m. At Somerville, N. J., an unusually severe thunderstorm, with hail and heavy rain, began in the early morning; one house was struck by lightning. A church was struck by lightning at Lebanon, N. J. Near Alloway, N. J., a barn was struck by lightning and burned. Considerable damage was caused about Ellisboro, N. J., by hail. Destructive thunder and hail storms were reported in Delaware and southeastern Pennsylvania. At Pittsburg, Pa., thunder and rain storm began 7.25 p. m.; the wind reached a velocity of 38 miles per hour from 7.40 to 7.48 p. m., and an extreme velocity of 48 miles, causing much damage to property. At Blue Knob, Pa., a thunderstorm began 7.10 p. m., and continued during the night; the wind reached an estimated velocity of 60 miles per hour, blowing down houses, trees, etc. At Harrodsburg, Ky., a thunder, rain, and wind storm began 8.30 p. m., and continued during

the night. At Cheboygan, Mich., a thunderstorm began in the early morning and ended 7.45 a. m.; a barn was struck by lightning and burned. A thunderstorm, with exceptionally high wind, visited Thornville, Mich., in the afternoon.

26th.—Severe thunderstorms occurred in New England in the early morning. At Madison, Me., a set of farm buildings were destroyed. In New Hampshire and Vermont a number of buildings were struck by lightning and burned. At Taunton, Mass., a barn was struck by lightning and burned. At Nahant, Mass., several houses were unroofed, and a number of vessels dragged anchor and parted cables. At Narragansett Pier, R. I., a thunderstorm prevailed from 5.30 to 10 a. m. At New Haven, Conn., high wind began 10 a. m., causing damage of a minor character. At Woods Holl, Mass., the wind reached a velocity of 52 miles per hour from the southwest. High northwest winds prevailed over New York. In Brooklyn, N. Y., several unfinished buildings were blown down, and two boys and a man were killed. Many small vessels were driven ashore or sunk. At Oswego, N. Y., the wind reached a velocity of 51 miles per hour from the northwest. Damage was caused by heavy wind about Dyberry, Pa. At Lodi, Cal., a thunderstorm occurred between 8 and 11 p. m.; east of that place, at Clements, high wind, heavy rain, and hail were reported, and a man was killed by a falling tree.

27th.—The night of the 26–27th the wind reached a velocity of 100 miles per hour from the northwest, and snow fell on the summit of Mount Washington, N. H. An exceptionally heavy rain and thunder storm was reported at Brunswick, Ga., in the morning; streets were flooded, causing great damage to property. A heavy thunderstorm from the northwest visited Columbia, Mo., in the evening.

28th.—Stock was killed by lightning at Irena, Mo., and damage was caused by lightning at Clinton, Mo.

29th.—A severe rain, wind, and hail storm visited Eagle Pass, Tex., about 6 p. m.

INLAND NAVIGATION.

STAGE OF WATER IN RIVERS.

The following table shows the danger-points at the various river stations; the highest and lowest stages for the month, with the dates of occurrence, and the monthly ranges:

Heights of rivers above low-water mark, Sept., 1892 (*in feet and tenths*).

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Height.	Date.	Height.	Date.	
Red River.						
Shreveport, La	29.9	4.6	19, 20	1.7	15, 30	2.9
Arkansas River.						
Fort Smith, Ark	22.0	6.2	2	1.5	30	4.7
Little Rock, Ark	23.0	9.2	4	6.3	29, 30	2.9
Missouri River.						
Fort Buford, N. Dak	.....	7.0	1	4.9	29	2.1
Bismarck, N. Dak	.....	2.5	1, 2, 8	1.8	26–30	0.7
Pierre, S. Dak	14.0	1.6	1–4	0.5	30	1.1
Sioux City, Iowa	18.7	6.4	1	5.1	30	1.3
Omaha, Nebr	18.0	7.8	1, 2	5.9	30	1.9
Kansas City, Mo	21.0	8.1	1	5.8	29, 30	2.3
Mississippi River.						
Saint Paul, Minn	14.0	4.1	14	2.9	28	1.2
La Crosse, Wis	11.8	3.6	15–17	2.4	30	1.2
Dubuque, Iowa	16.0	4.8	20	3.5	30	1.3
Davenport, Iowa	15.0	3.2	11, 12, 16–18	2.2	9	1.0
Keokuk, Iowa	14.0	3.5	1	2.2	30	1.3
Hannibal, Mo	17.0	4.8	1	3.4	9, 10, 30	1.4
Saint Louis, Mo	30.0	9.6	1	6.8	30	2.8
Cairo, Ill	40.0	10.1	1	7.0	30	3.1
Memphis, Tenn	33.0	7.7	1	5.1	30	2.6
Vicksburg, Miss	41.0	11.2	1	5.3	30	5.9
New Orleans, La	13.0	5.2	12	3.5	21–23	1.7

Heights of rivers—Continued.

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Height.	Date.	Height.	Date.	
Ohio River.						
Parkersburg, W. Va	38.0	5.0	2	1.9	28	3.1
Cincinnati, Ohio	45.0	7.2	7	4.8	19, 20	2.4
Louisville, Ky	24.0	4.1	8, 9	3.4	22, 23	0.7
Cumberland River.						
Nashville, Tenn	40.0	2.3	5, 6	1.1	30	1.2
Tennessee River.						
Chattanooga, Tenn	33.0	4.6	17	1.3	5	3.3
Knoxville, Tenn	29.0	.....	.....	.....	.....	.....
Monongahela River.						
Pittsburg, Pa	29.0	6.2	12, 18	4.8	23	1.4
Savannah River.						
Augusta, Ga	32.0	20.8	23	5.9	10, 12	14.9
Willamette River.						
Portland, Oregon	15.0	3.6	6, 7	1.2	30	2.4
Susquehanna River.						
Harrisburg, Pa	17.0	2.9	1	1.1	29, 30	1.8
Alabama River.						
Montgomery, Ala	48.0	7.2	25	1.8	12	5.4

At Chattanooga, Tenn., navigation on the Tennessee River was suspended on the 9th on account of low water; on the 15th, 16th, and 17th the river rose slowly, and on the 17th navigation opened on the upper Tennessee; on the 18th the river was falling; on the 21st navigation was again closed on account of low water; on the 25th and 26th the river rose slowly.

ATMOSPHERIC ELECTRICITY.

THUNDERSTORMS.

Description of the more severe thunderstorms of the month is given under "Local storms."

Thunderstorms were reported as follows: East of the Rocky Mountains they were reported in the greatest number of states, 24, on the 26th; in 23 on the 9th and 25th; in 15 to 20 on the 4th, 5th, 7th, 8th, 10th, 12th, 13th, 19th, 20th, and 21st; in 10 to 14 on the 3d, 6th, 11th, 14th, 22d, 23d, 24th, and 27th; in 5 to 9 on the 1st, 2d, 16th, 17th, 18th, 28th, 29th, and 30th. The only date on which they were reported in less than 5 states was the 15th, when they were noted in Florida and New York.

East of the Rocky Mountains thunderstorms were reported on the greatest number of dates, 30, in Florida; on 15 to 20 in Georgia, Iowa, Michigan, Mississippi, North Carolina, Pennsylvania, and Wisconsin; on 10 to 14 in Alabama, Illinois, Indiana, Kansas, Kentucky, Louisiana, Missouri, Nebraska, New York, Ohio, South Carolina, South Dakota, Tennessee, and Texas; on 5 to 9 in Arkansas, Maryland, Minnesota, Montana, North Dakota, Oklahoma, Virginia, and West Virginia; and on 1 to 4 in Connecticut, District of Columbia, Maine, Massachusetts, New Hampshire, New Jersey, Rhode Island, and Vermont.

West of the Rocky Mountains thunderstorms were reported in Arizona on the 1st, 5th to 10th, 24th, 27th, and 30th; in California, on the 7th, 8th, 18th, 24th, 25th, 26th, 28th, 29th, and 30th; in Colorado on the 1st to 4th, 18th, 19th, 20th, 28th, and 29th; in Idaho on the 29th; in Nevada on the 1st, 2d, 9th, 14th, 19th, 24th, 25th, 26th, 28th, 29th, and 30th; in New Mexico on the 4th, 5th, 7th, 9th, and 10th; in Utah on the 2d, 26th, 28th, 29th, and 30th; in Washington on the

17th, 22d, 23d, and 24th; and in Wyoming on the 18th and 30th.

AURORAS.

Notable auroral displays of September, 1892.

Date.	Station.	Extent of display.		Remarks.
		Azimuth.	Altitude.	
		°	°	
1	Sault Ste. Marie, Mich..	240 to 270	20	Pale yellow color.
12	Sault Ste. Marie, Mich..	180 to 270	40	Pale yellow resting on dark segment, with beams of light.
12	Saint Paul, Minn	170 to 210	10	Pale light resting on dark segment.
12	Fort Buford, N. Dak....	180 to 225	18	Two arches, with small, brilliant streamers.
16	Grand Haven, Mich.....	90 to 160	60	Pale light, with grayish white streamers.
16	Sault Ste. Marie, Mich..	180 to 270	50	Bluish light, with shooting beams of light.
16	Saint Paul, Minn	180 to 210	60	Faint light, with vertical shooting beams.
27–28	Marquette, Mich	135 to 225	45	Faint arch, with streamers.
27	Sault Ste. Marie, Mich..	180 to 270	25	Greenish color.

Auroral displays of September, 1892—Continued.

Date.	Station.	Extent of display.		Remarks.
		Azimuth.	Altitude.	
		°	°	
28–29	Marquette, Mich	135 to 225	75	Pale green, with beams of light which moved from west to east.
28	Saint Paul, Minn	170 to 210	14	Pale light, with slender vertical beams of white light.
28	Havre, Mont.....	Cov'd 190	45	Pale green tint, with occasional beams.

The more widely observed auroral displays of the month were reported from New England, New York, and Pennsylvania to eastern Idaho and eastern Montana on the 12th; from New England to Iowa, Minnesota, and eastern North Dakota on the 16th; from Maine to Washington and southward to Missouri on the 27th and 28th; and from the upper lake region to Montana on the 29th.

STATE WEATHER SERVICES.

[*Temperature in degrees Fahrenheit; precipitation, including melted snow, in inches and hundredths.*]

The following extracts and summaries are republished from reports for September, 1892, of the directors of the various state weather services:

ALABAMA.

Temperature.—Maximum, 110, at Union Springs, 1st; minimum, 37, at Jasper, 29th; greatest monthly range, 60, at Union Springs; least monthly range, 24, at Pittsboro.

Precipitation.—The average was 0.54 above the normal; greatest monthly, 7.51, at Maysville; least monthly, 0.73, at Livingston.—*P. H. Mell, Observer, Weather Bureau, Auburn, director.*

ARIZONA.

The month was unusually warm and dry.

Temperature.—Maximum, 111, at Arizona Canal Company's Dam, 26th, and at Yuma, 27th; minimum, 41, at Fort Apache, 5th and 27th; greatest monthly range, 55, at San Carlos; least monthly range, 24, at Farleys Camp.

Precipitation.—Greatest monthly, 1.23, at Fort Apache; least monthly, 0.00, at a number stations.

Wind.—Prevailing direction, southwest.—*J. C. Hayden, Observer, Weather Bureau, Tucson, director.*

ARKANSAS.

Temperature.—The mean was 1.9 below the normal; maximum, 96, at Texarkana, 10th, and at Keesees Ferry, 25th; minimum, 43, at Fayetteville, Harrison, Hot Springs, and Melbourne, 14th, at Kirby, 2d, and at Melbourne, 23d; greatest monthly range, 52, at Hot Springs; least monthly range, 32, at Prescott.

Precipitation.—The average was 1.01 below the normal; greatest monthly, 6.96, at Greenville, Miss.; least monthly, trace, at Forrest.

Wind.—Prevailing direction, south.—*M. F. Locke, Commissioner of Agriculture, Little Rock, director; F. H. Clarke, Local Forecast Official, Weather Bureau, assistant.*

CALIFORNIA.

Temperature.—Maximum, 108, at Needles, 6th; minimum, 33, at Pleasanton, 4th; greatest monthly range, 60, at San Ardo and Winchester; least monthly range, 28, at Berkeley.

Precipitation.—Greatest monthly, 2.26, at Crescent City; least monthly, 0.00, at a number of stations.

Wind.—Prevailing directions, west and northwest.—*J. A. Barwick, Observer, Weather Bureau, Sacramento, director.*

COLORADO.

The month was the warmest and driest on record.

Temperature.—The mean was 4.2 above the normal; maximum, 99, at Lamar, 19th, and at Orchard, 16th; minimum, 19, at Alma, 11th; greatest monthly range, 65, at Delta; least monthly range, 42, at Grand Junction.

Precipitation.—The average was 0.80 below the normal; greatest monthly, 1.12, at Castle Rock; least monthly, 0.00, at a number of stations.

Wind.—Prevailing direction, west.—*W. S. Miller, Observer, Weather Bureau, Denver, director.*

FLORIDA.

Temperature.—Maximum, 94, at Mullet Key and Orlando, 5th, and at Bristol, 24th and 25th; minimum, 60, at Bristol, 15th, and at Pensacola, 16th; greatest monthly range, 34, at Bristol; least monthly range, 17, at Amelia.

Precipitation.—Greatest monthly, 16.67, at Titusville; least monthly, 1.72, at Pensacola.

Wind.—Prevailing direction, northeast.—*E. R. Demain, Observer, Weather Bureau, Jacksonville, director.*

GEORGIA.

Temperature.—Maximum, 98, at Bainbridge, 3d; minimum, 44, at Newman, 29th; greatest monthly range, 45, at Louisville; least monthly range, 20, at Fleming.

Precipitation.—Greatest monthly, 20.05, at Darien; least monthly, 1.14, at Columbus.

Wind.—Prevailing direction, east.—*Park Morrill, Local Forecast Official, Weather Bureau, Atlanta, director.*

IDAHO.

Temperature.—Maximum, 94, at Boise Barracks, 15th; minimum, 20, at Lake, 8th; greatest monthly range, 60, at Boise Barracks and Lake; least monthly range, 48, at Moscow.

Precipitation.—Greatest monthly, 5.10, at Kootenai; least monthly, 0.02, at Martin.

Wind.—Prevailing direction, southwest.—*J. H. Smith, Observer, Weather Bureau, Idaho Falls, director.*

ILLINOIS.

Temperature.—The mean was 0.1 below the normal; maximum, 96, at Muddy Valley, 21st; minimum, 31, at Philo, 27th.

Precipitation.—The average was 1.02 below the normal; greatest monthly, 3.46, at Griggsville; least monthly, 0.43, at Rantoul.

Wind.—Prevailing direction, south.—*John Craig, Observer, Weather Bureau, Springfield, director.*

INDIANA.

Temperature.—The mean was 1.2 above the normal; maximum, 92, at Michigan City, 23d; minimum, 34, at Lafayette, 27th; greatest monthly range, 56, at Farmland and Point Isabel; least monthly range, 35, at New Albany.

Precipitation.—The average was 0.21 below the normal; greatest monthly, 8.00, at Huntingburg; least monthly, 1.22, at Lafayette.

Wind.—Prevailing direction, southwest.—*Prof. H. A. Huston, Lafayette, director; C. F. R. Wappenhans, Local Forecast Official, Weather Bureau, assistant.*

IOWA WEATHER AND CROP SERVICE.

Temperature.—The mean was 2.0 above the normal; maximum, 99, at Atlantic, 23d; minimum, 29, at Atlantic, 14th and 16th; greatest monthly range, 70, at Atlantic; least monthly range, 32, at Fort Madison.

Precipitation.—The average was 2.00 below the normal; greatest monthly, 4.15, at Delaware; least monthly, 0.16, at Ames.

Wind.—Prevailing direction, south.—*J. R. Sage, Des Moines, director; G. M. Chappel, Local Forecast Official, Weather Bureau, assistant.*

KANSAS.

Temperature.—The mean was 1.7 above the normal; maximum, 103, at Ulysses, 24th; minimum, 35, at Shields, 14th and 24th; greatest monthly range, 65, at Morland; least monthly range, 37, at Salina.

Precipitation.—The average was 1.23 below the normal; greatest monthly, 3.99, at Kellogg; least monthly, 0.00, at Colby and New England Ranch.

Wind.—Prevailing direction, south.—*Prof. J. T. Lovewell, Topeka, director; T. B. Jennings, Observer, Weather Bureau, assistant.*

KENTUCKY.

Temperature.—The mean was about 1.0 below the normal; maximum, 93,

at Shelbyville, 9th; minimum, 38, at Harrodsburg, 27th, and at Central City, 28th; greatest monthly range, 54, at Shelbyville; least monthly range, 27, at Mumfordsville.

Precipitation.—The average was slightly below the normal; greatest monthly, 5.18, at Mount Sterling; least monthly, 0.11, at Robard.

Wind.—Prevailing direction, south.—*Frank Burke, Observer, Weather Bureau, Louisville, director.*

LOUISIANA.

Temperature.—The mean was 2.7 below the normal; maximum, 100, at Clinton, 26th; minimum, 40, at Winnsboro, 5th; greatest monthly range, 55, at Winnsboro; least monthly range, 25, at Emilie and New Orleans.

Precipitation.—The average was 1.99 below the normal; greatest monthly, 7.85, at Lawrence; least monthly, 0.02, at Amite.

Wind.—Prevailing direction, north.—*George E. Hunt, Local Forecast Official, Weather Bureau, New Orleans, director.*

MARYLAND.

Temperature.—Maximum, 98, at Edgemont, 4th and 5th; minimum, 40, at Boettcherville, 8th; greatest monthly range, 52, at Edgemont; least monthly range, 25, at Jewell.

Precipitation.—Greatest monthly, 5.82, at Frederick; least monthly, 1.75, at Solomons.

Wind.—Prevailing direction, southeast.—*Dr. William B. Clark, Johns Hopkins University, Baltimore, director; Prof. Milton Whitney, Maryland Agricultural College, secretary and treasurer; C. P. Cronk, Observer, Weather Bureau, in charge.*

MICHIGAN.

Temperature.—The mean was 1.0 above the normal; maximum, 91, at Mottville, 4th; minimum, 27, at McMillan, 20th; greatest monthly range, 58, at Crystal Falls; least monthly range, 30, at Noble.

Precipitation.—The average was 0.25 above the normal; greatest monthly, 6.13, at Adrian; least monthly, 1.03, at Lathrop.

Wind.—Prevailing direction, southwest.—*E. A. Evans, Local Forecast Official, Weather Bureau, Detroit, director.*

MINNESOTA.

Temperature.—Maximum, 99, at Granite Falls, 23d; minimum, 22, at Pokegama Falls, 26th; greatest monthly range, 65, at Granite Falls; least monthly range, 35, at Clear Lake.

Precipitation.—Greatest monthly, 3.82, at Bird Island; least monthly, 0.18, at Montevideo.

Wind.—Prevailing direction, south.—*J. H. Harmon, Observer, Weather Bureau, Minneapolis, director.*

MISSISSIPPI.

Temperature.—The mean was 2.1 below the normal; maximum, 98, at Vaiden, 25th; minimum, 42, at Lake, 15th; greatest monthly range, 51, at Port Gibson and Vaiden; least monthly range, 22, at Ship Island.

Precipitation.—The average was 0.29 below the normal; greatest monthly, 9.10, at Pontotoc; least monthly, 0.05, at Jackson.

Wind.—Prevailing direction, northeast.—*R. B. Fulton, Observer, Weather Bureau, University, director.*

NEBRASKA.

Temperature.—Maximum, 110, at Mullen, 13th; minimum, 27, at Ansley, 13th; greatest monthly range, 78, at Mullen; least monthly range, 36, at Holdrege.

Precipitation.—Greatest monthly, 3.77, at Hayes Center; least monthly, 0.00, at Dunning, Palmer, and Bookwalter.

Wind.—Prevailing direction, south.—*Prof. Goodwin D. Swezey, Crete, director; G. A. Loveland, Observer, Weather Bureau, assistant.*

NEVADA.

Temperature.—The mean was 1.0 below the normal; maximum, 109, at Elko, 8th; minimum, 15, at Sunnyside, 22d; greatest monthly range, 89, at Eureka; least monthly range, 33, at Toano.

Precipitation.—The average was considerably below the normal; greatest monthly, 0.61, at Cranes Ranch; least monthly, 0.00, at several stations.

Wind.—Prevailing direction, southwest.—*Prof. Charles W. Friend, Carson City, director; F. A. Carpenter, Observer, Weather Bureau, assistant.*

NEW ENGLAND.

Temperature.—The mean was 0.8 below the normal; maximum, 88, at Andover, 5th; minimum, 27, at Plymouth, N. H., 21st; greatest monthly range, 54, at Plymouth; least monthly range, 20, at Block Island.

Precipitation.—The average was 1.23 below the normal; greatest monthly, 5.63, at Mayfield; least monthly, 0.65, at Andover.

Wind.—Prevailing direction, southwest.—*J. Warren Smith, Observer, Weather Bureau, Boston, director.*

NEW JERSEY.

Temperature.—The mean was 0.3 below the normal; maximum, 90, at Plainfield and New Brunswick, 5th; minimum, 33, at River Vale, 30th; greatest monthly range, 54, at River Vale; least monthly range, 31, at Asbury Park.

Precipitation.—The average was 2.08 below the normal; greatest monthly, 3.78, at Somerville; least monthly, 1.02, at Ocean City.

Wind.—Prevailing direction, southeast.—*E. W. McGann, Observer, Weather Bureau, New Brunswick, director.*

NEW MEXICO.

Temperature.—Maximum, 96, at Las Cruces, 15th; minimum, 28, at Chama, 21st; greatest monthly range, 64, at Chama; least monthly range, 34, at Clayton.

Precipitation.—Greatest monthly, 0.79, at Halls Peak. In the north-central and northwestern parts of the Territory no rainfall was reported.

Wind.—Prevailing directions, east.—*H. B. Hersey, Observer, Weather Bureau, Santa Fe, director.*

NEW YORK.

Temperature.—The mean was 0.3 below the normal; maximum, 89, at Waverly, 25th; minimum, 29, at South Kortright, 21st; greatest monthly range, 58, at Number Four; least monthly range, 32, at New York.

Precipitation.—The average was 0.74 below the normal; greatest monthly, 5.37, at Adams Center; least monthly, 0.57, at Watkins.

Wind.—Prevailing direction, southwest.—*Prof. E. A. Fuertes, Dean of the College of Civil Engineering, Cornell University, Ithaca, director; R. M. Hardinge, Observer, Weather Bureau, assistant.*

NORTH CAROLINA.

Temperature.—The mean was 1.6 below the normal; maximum, 93, at Chapel Hill, 6th, and at Southern Pines, 1st; minimum, 33, at Bakersville, 27th; greatest monthly range, 51, at Bakersville; least monthly range, 21, at Hatteras.

Precipitation.—The average was 0.79 below the normal; greatest monthly, 15.74, at Columbus; least monthly, 0.40, at Pittsboro.

Wind.—Prevailing direction, northeast.—*Dr. Herbert B. Battle, Raleigh, director; C. F. von Herrmann, Observer. Weather Bureau, assistant.*

NORTH DAKOTA.

Temperature.—The mean was 4.5 above the normal; maximum, 101, at Woodbridge, 17th; minimum, 24, at Woodbridge, 15th and 25th; greatest monthly range, 77, at Woodbridge; least monthly range, 51, at Grand Forks.

Precipitation.—The average was 0.79 below the normal; greatest monthly, 2.21, at Fort Stevenson; least monthly, 0.11, at Fort Buford.

Wind.—Prevailing direction, northwest.—*W. H. Fallon, Observer, Weather Bureau, Bismarck, director.*

OHIO.

Temperature.—The mean was normal; maximum, 96, at Logan, 9th; minimum, 34, at Ohio State University, Greenfield, Lordstown, and Van Wert, 27th; greatest monthly range, 56, at Logan; least monthly range, 34, at Ashland.

Precipitation.—The average was 0.67 below the normal; greatest monthly, 5.79, at Montpelier; least monthly, 0.70, at Circleville.

Wind.—Prevailing direction, southwest.—*Prof. B. F. Thomas, Columbus, director; C. M. Strong, Observer, Weather Bureau, secretary and assistant.*

OKLAHOMA.

Temperature.—Maximum, 105, at Purcell, 26th; minimum, 40, at Ponca, 30th; greatest monthly range, 58, at Buffalo and Gate City; least monthly range, 28, at Kingfisher.

Precipitation.—Greatest monthly, 3.76, at Keokuk Falls; least monthly, 0.65, at Burnett.

Wind.—Prevailing direction, south.—*J. I. Widmeyer, Observer, Weather Bureau, Oklahoma City, director.*

OREGON.

Temperature.—The mean was 1.3 above the normal; maximum, 102, at Canyon City, 12th; minimum, 22, at Burns, 21st; greatest monthly range, 68, at Burns; least monthly range, 31, at Astoria.

Precipitation.—The average was 0.33 above the normal; greatest monthly, 10.27, at Glenora; least monthly, 0.12, at Arlington.

Wind.—Prevailing direction, southwest.—*Hon. H. E. Hayes, Master State Grange, Portland, director; B. S. Pague, Local Forecast Official, Weather Bureau, assistant.*

PENNSYLVANIA.

Temperature.—The mean was 1.0 above the normal; maximum, 90, at McConnellsburg, 4th; minimum, 29, at Selins Grove, 30th; greatest monthly range, 59, at Selins Grove; least monthly range, 30, at Philadelphia.

Precipitation.—The average was 0.86 below the normal; greatest monthly, 4.85, at Carlisle; least monthly, 1.18, at Wellsboro.

Wind.—Prevailing direction, west.—*Under direction of the Franklin Institute, Philadelphia; H. L. Ball, Observer, Weather Bureau, assistant.*

SOUTH CAROLINA.

Temperature.—Maximum, 93, at Blackville and Green Pond, 1st; minimum, 40, at Cheraw, 28th.

Precipitation.—Greatest monthly, 14.95, at Port Royal; least monthly, 2.71, at Winnsboro.

Wind.—Prevailing direction, northeast.—*A. P. Butler, Observer, Weather Bureau, Columbia, director.*

SOUTH DAKOTA.

Temperature.—The mean was 4.6 above the normal; maximum, 102, at Alexandria, 23d; minimum, 21, at Parkston, 13th; greatest monthly range, 74, at Parkston; least monthly range, 46, at Forest City.

Precipitation.—The average was 1.10 below the normal; greatest monthly, 1.49, at Brookings; least monthly, trace, at Piedmont, Sioux Falls, and Tyndall.

Wind.—Prevailing direction, south.—*S. W. Glenn, Local Forecast Official, Weather Bureau, Huron, director.*

TENNESSEE WEATHER AND CROP SERVICE.

Temperature.—The mean was 1.0 below the normal; maximum, 92, at Arlington, 10th, and at Byrdstown, 25th; minimum, 38, at Johnson City, 29th; greatest monthly range, 50, at Newport and Milan; least monthly range, 28, at Lookout Mountain.

Precipitation.—The average was 0.54 below the normal; greatest monthly, 5.42, at Chattanooga; least monthly, 0.60, at Springdale.

Wind.—Prevailing direction, south.—*J. B. Marbury, Local Forecast Official, Weather Bureau, Nashville, director.*

TEXAS.

Temperature.—The mean was 0.4 below the normal; maximum, 101, at College Station, 24th, at Aurora and Roby, 27th, and at Highland, 28th; minimum, 36, at Fort Hancock, 14th; greatest monthly range, 63, at Fort Hancock; least monthly range, 21, at Galveston.

Precipitation.—The average was 2.50 below the normal; greatest monthly, 5.99, at Tyler; least monthly, 0.00, at Fort Hancock and Hartley.

Wind.—Prevailing direction, southeast.—*D. D. Bryan, Galveston, director; I. M. Cline, Local Forecast Official, Weather Bureau, assistant.*

UTAH.

The month was one of the driest on record.

Temperature.—Maximum, 102, at Saint George, 7th and 16th; minimum, 20, at Scofield, 21st; greatest monthly range, 67, at Scofield; least monthly range, 36, at Grouse Creek.

Precipitation.—Greatest monthly, 0.54, at Ogden; least monthly, 0.00, at several stations.

Wind.—Prevailing direction, southeast.—*G. N. Salisbury, Observer, Weather Bureau, Salt Lake City, director.*

VIRGINIA.

Temperature.—Maximum, 90, at Nottoway, 25th, at Petersburg, 1st, and at Richmond, 5th; minimum, 36, at Hot Springs, 26th; greatest monthly range, 48, at Nottoway; least monthly range, 31, at Mossingford and Norfolk.

Precipitation.—Greatest monthly, 4.96, at Avon; least monthly, 1.33, at Norfolk.

Wind.—Prevailing direction, northeast.—*Dr. E. A. Craighill, Lynchburg, director; J. N. Ryker, Observer, Weather Bureau, assistant.*

WEST VIRGINIA.

Temperature.—Maximum, 92, at Spencer, 1st; minimum, 32, at Morgantown, 30th; greatest monthly range, 51, at Spencer; least monthly range, 33, at Martinsburg.

Precipitation.—Greatest monthly, 4.49, at Glenville; least monthly, 1.32, at Hinton.—*W. W. Dent, Observer, Weather Bureau, Parkersburg, director.*

WISCONSIN.

Temperature.—The mean was slightly above the normal, except in the central counties where it was slightly below; maximum, 95, at Whitehall, 24th and 30th; minimum, 29, at Barron, 26th.

Precipitation.—The average was considerably below the normal; greatest monthly, 4.26, at Baraboo; least monthly, 0.45, at Bayfield.—*W. L. Moore, Local Forecast Official, Weather Bureau, Milwaukee, director.*

WYOMING.

Temperature.—Maximum, 93, at Wheatland, 27th; minimum, 19, at Saratoga, 11th; greatest monthly range, 65, at Saratoga; least monthly range, 42, at Lander.

Precipitation.—Greatest monthly, 1.60, at Fort Yellowstone; least monthly, 0.00, at Evanston, Fort Washakie, Saratoga, and Wheatland.

Wind.—Prevailing direction, south.—*E. M. Ravenscraft, Observer, Weather Bureau, Cheyenne, director.*

CONTRIBUTIONS AND ORIGINAL ARTICLES.

A SEPTEMBER NORTHER ON THE MEXICAN COAST.

The following description of a "norther" which prevailed along the Mexican coast about Vera Cruz, Mexico, from September 24 to 27, 1892, is furnished by Mr. G. Baturoni, of the Meteorological and Climatological Observatory of the Literary and Mercantile Institute, Vera Cruz:

During the latter part of the month we suffered from a "norther" which was a veritable cyclone and which, if it were not felt at the American ports of the Gulf, would serve to throw a great deal of light upon our investigations, as it would be evidence that some of these "northers" form and develop in the Gulf of Mexico without having any connection with the American "northers."

This storm began on the 24th and continued until the 27th. The maximum wind velocity was reached on the 25th, when it continued with undiminished strength for 6 hours. It blew continually in whirls, carrying away roofs of small houses in the environs of Vera Cruz, dashed the American brig "Bazanes" upon the coast, interrupted telegraphic communication, and caused serious damage on the Mexican Railroad. In the southern part of the state of Vera Cruz, even on the frontier, including Oaxaca, the storm was terrible in character and disastrous in its effects, and lightning was an attendant phenomenon. In that section 5 brick and more than 200 wooden houses were thrown down, a large number of cattle were killed, crops were ruined, trees were uprooted in great numbers, and, what was still worse, many persons were killed and numbers were injured. At Pachuca and to the north of Vera Cruz the storm was very severe.

At Vera Cruz the wind began to blow from the north on the 23d; at 10 a. m. its velocity was 4 miles per hour; at 3 p. m. 6 miles per hour, and at 10 p. m. 4 miles per hour. At midnight the wind was from the northwest. From 4 to 5 a. m., 24th, there was a torrential rain. The rain ended and the wind remained in the west, returning to north at 9 a. m. At 10 a. m. the velocity was 8 miles per hour; at 3 p. m. 10 miles, and at 10 p. m. 18 miles. The night of the 24th was rainy. At daybreak on the 25th the wind was west-northwest; at 8 a. m. it was north and blowing vigorously; at 10 a. m. it was blowing at the rate of 15 miles per hour; toward 11 a. m. it shifted to west. At 11 a. m. Tampico began to feel the "norther," force 7. As soon as the wind settled in the west the sea gave forth a sound like the continuous rumbling of distant but approaching thunder. At 3 p. m. the wind was still from the west; at 5 p. m. it changed suddenly to north, increasing in strength and blowing in whirling squalls, each more violent than the last. At 10 p. m. the wind velocity was 40 miles per hour and rain fell in torrents. After 10.30 p. m. the squalls, in spite of the rain, were very frequent and showed a velocity of 48 miles per hour. This velocity was doubtless exceeded, but it was impossible to measure it exactly, owing to wind and rain. Violent wind and heavy rain continued until 1 a. m. of the 26th, when the wind diminished in force. The rain continued, however, and in 30 hours more than 5 inches of water fell.

METEOROLOGICAL TABLES.

Meteorological record of Army post surgeons, voluntary, and other co-operating observers, September, 1892.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean.	Precip'n.	Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Alabama.	°	°	°	*Ins.*	*Alabama*—Cont'd.	°	°	°	*Ins.*
Alco	88	53	72·7	.....	Fayette†	85	50	69·4	1.16
Bermuda*†[5]	87	47	72·5	1.15	Florence *a*†	.....	.....	.....	3·74
Bessemer	90	49	71·1	6.35	Florence *b*†	87	46	68.2	3·76
Brewton†	96	52	76·5	3.00	Fort Deposit†	88	53	72·0	1·55
Carrollton*†[1]	86	53	71·0	1·84	Gadsden†	.....	.....	.....	3.00
Citronelle†	86	60	74·6	4.65	Geneva†	90	57	75·0	2·54
Claiborne Landing†	.....	.....	.....	1·25	Greensboro†	88	53	71·5	2·17
Cordova†	.....	.....	.....	4.63	Healing Springs†	95	60	75·2	3·45
Daphne†	97	35	77·0	6.58	Jasper†	86	37	67·6	5·20
Decatur *a*†	.....	.....	.....	5.01	Livingston *a*†[1]	88	51	71·3	0.67
Decatur *b*†	86	43	66.8	4·47	Livingston *b*†	90	48	71·5	0.73
Eufaula *a*†	89	50	74·3	3.14	Lock No. 4*	.....	58	.....	2.38
Evergreen†	89	51	73·3	2.08	Lynn†	.....	.....	.....	6.08
Fayette†	85	50	69·4	1.16	Marion†	89	53	72·4	3·35
Florence *a*†	.....	.....	.....	3·74	Maysville†	82	54	69·5	7·51
Florence *b*†	87	46	68.2	3·76	Mount Willing†	88	54	73·9	2.26
Fort Deposit†	88	53	72·0	1·55	Newburg†	88	47	68.2	4·59
Gadsden†	.....	.....	.....	3.00	Opelika†	88	55	73·6	2·72
Geneva†	90	57	75·0	2·54	Oxanna*†[1]	85	48	69·0	2.54
Greensboro†	88	53	71·5	2·17	Pine Apple†	89	50	71·7	1·09
Healing Springs†	95	60	75·2	3·45	Pittsboro†	87	63	76·7	3·40
Jasper†	86	37	67·6	5·20	Pushmataha†	85	50	70·2	1.25
Livingston *a*†[1]	88	51	71·3	0.67	Selma *a*†	.....	.....	.....	1·81
Livingston *b*†	90	48	71·5	0.73	Scottsboro	85	50	68·3	.....
Lock No. 4*	.....	58	.....	2.38	Sturdevant†	.....	.....	.....	3·22
Lynn†	.....	.....	.....	6.08	Talladega†	.....	.....	.....	1.29
					Tallassee Falls†	.....	.....	.....	2.52
					Thomasville†	90	58	73·4	2.43
					Tuscaloosa†	.....	.....	.....	2·57
					Tuscumbia *a**[1]	86	52	68.2	3.80
					Tuscumbia *b*†	87	48	69.0	2.94
					Union Springs *a*†	91	51	72.8	3·30
					Union Springs *b*†	94	50	72.2	3·38
					Uniontown	89	53	74·0	3·94
					Valley Head †[1]	84	44	66·7	6.69
					Wetumpka*	.....	60	.....	3.09
					Wilsonville†	.....	.....	.....	2·77
					Alaska.				
					Killisnoo†[1]	62	34	44·7	8.55
					Metlakahtla†	70	38	52.8	8.38

Meteorological record of voluntary observers, &c.—Continued.

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Arizona.	°	°	°	*Ins.*
Antelope Valley †	.....	.....	.....	0.00
Aris. Can. Co. Dam. †	111	63	86.4	0.00
Benson *1	96	66	81.9	0.03
Bisbee †1	94*	56	72.7	0.44
Calabasas †	95	54	73.6	0.63
Casa Grande *1	108	72	89.5	0.00
Chiricahua Mts †	.....	.....	.....	0.02
Crittenden *†5	100	50	75.7	0.89
Dos Cabezos *†1	91	60	76.4	0.05
Dragoon †	.....	.....	.....	0.19
Dragoon Summit *b	92	61	79.6	0.45
Dudleyville †1	102	58	80.7	0.01
Eagle Pass *3	91	56	73.2	0.01
Farleys Camp 2	.....	.....	85.2	0.00
Florence †	110	60	84.1	T.
Fort Apache	91	41	66.2	1.23
Fort Bowie	94	56	75.2	0.00
Fort Grant	97	54	76.6	0.11
Fort Huachuca	93	52	73.8	0.34
Fort Mohave †	115	59	88.0	0.00
Gila Bend *†1	104	70	90.1	0.65
Gila Bend b *1	114	70	93.5	0.36
Holbrook †	96	44	69.0	0.11
Maricopa *1	107	73	87.4	0.15
Mount Huachuca †	90	57	73.5	0.24
Natural Bridge †	.....	.....	.....	T.
Navajo Springs †	.....	.....	.....	0.00
New River †	104	55	83.1	0.00
Nogales †b	95	59	76.2	0.03
Oracle †1	95	60	77.2	.....
Oro	.....	.....	.....	0.23
Pantano *1	106	67	82.7	0.33
Payson *1	95	46	69.6	0.30
Phœnix a †	107	63	85.5	0.00
Red Rock *5	110	75	92.6	0.00
Reymert †	104	61	81.8	T.
San Carlos	107	52	78.9	0.00
San Simon *1	107	67	82.4	0.00
Show Low	.....	.....	.....	0.31
Signal †	108	54	83.2	0.28
Teviston	.....	.....	.....	T.
Texas Hill *1	112	73	91.1	0.00
Tucson a †	102	63	82.7	0.61
Tucson b *1	100	68	83.8	0.58
Walnut Ranch *†1	91	54	72.4	0.36
Whipple Barracks	92	43	67.8	0.14
Wilgus †	.....	.....	.....	0.25
Willcox *1	94	60	76.7	0.32
Winslow *†5	95	50	74.7	T.
Wood Canyon	.....	.....	.....	0.00
Yuma *1	111	70	86.3	0.03
Arkansas.				
Arkadelphia †	.....	.....	.....	3.68
Arkansas City †	.....	.....	.....	0.82
Bee Branch †1	94	48	70.2	2.22
Brinkley †	87	47	69.8	0.02
Camden a †	.....	.....	.....	3.18
Camden b †1	90	52	72.3	2.68
Conway *1	86	51	68.2	2.03
Dallas †1	91b	45b	70.4	3.80
Dardanelle †	.....	.....	.....	2.09
Eldorado †	89	56	72.8	3.81
Fayetteville †1	92	43	67.6	1.80
Forrest †	91	49	73.0	T.
Fulton †	.....	.....	.....	0.30
Gaines Landing †	.....	.....	.....	1.29
Harrison †	91	43	67.1	2.05
Helena a †	.....	.....	.....	0.19
Helena b †	92	48	72.0	0.26
Hope *†1	92	56	72.4	1.58
Hot Springs	95	43	70.1	1.63
Keesees Ferry *1	96	47	70.2	1.79
Kirby †	91	43	69.4	2.50
Lonoke *1	95	54	73.1	6.12
Madding 2	.....	.....	69.8	3.00
Melbourne †b	89	43	68.5	1.66
Mount Nebo †	85	50	68.6	1.87
New Gascony *1	93b	58	73.3[1]	2.86
Newport a †	.....	.....	.....	2.31
Newport b †	91	52	73.4	2.96
Osceola †1	90	49	70.0	0.28
Ozark †	.....	.....	.....	1.00
Pine Bluff †	91	50	72.6	3.67
Prescott †	87	55	72.2	1.38
Rogers †	.....	.....	.....	2.00
Russellville †	91	50	70.5	2.34
Searcy †1	88	50	68.0	2.92
Stuttgart †	90	46	69.7	1.04
Texarkana †	96	50	73.9	0.61
Washington b *1	90	56	71.4	1.61
Winslow *†1	79	56	68.5	2.40
California.				
Agnew 1	93	44	63.3	T.
Almaden *1	90	52	65.4	0.09
Alvarado †1	92	40	61.6	0.06
Anaheim *1	95	54	69.4	0.00
Antioch *1	95	58	68.7	0.22
Aptos *1	85	45	60.7	0.65
Arcata	.....	.....	.....	1.22
Arlington Heights	97	50	73.8	.....
Athlone *1	108	54	75.3	0.08
Auburn *1	94	57	71.6	0.15
Bakersfield a *1	101	57	78.9	0.00
Bakersfield b †	103	46	71.2	0.00
Beaumont *1	95	56	73.0	0.00

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
California—Cont'd.	°	°	°	*Ins.*
Belmont *1	90	56	65.8	.....
Berendo *1	102	62	78.8	0.00
Berkeley	79	51	61.4	0.07
Boca *1	84	27	51.3	0.00
Borden *1	102	60	74.7	0.08
Boulder Creek *1	93	41	61.2	0.39
Brentwood *1	92	52	68.9	0.35
Brighton *1	100	57	72.4	0.15
Byron *1	94	52	69.7	0.27
Caliente *1	98	57	70.0	0.00
Cape Mendocino LH	.....	.....	.....	0.43
Capitola *1	80	48	63.3	.....
Castroville *1	87	50	61.8	0.23
Centerville *1	98	58	66.7	0.01
Chico *1	98	53	72.8	0.00
Cisco *1	80	34	54.2	0.30
Claremont †	97	47	70.6	0.00
Colfax *1	98	45	66.8	.....
Colton *1	98	50	69.8	0.00
Corning *1	95	54	73.4	0.00
Crescent City	.....	.....	.....	2.27
Crescent City L. H.	.....	.....	.....	2.03
Crofton *1	100	51	72.7	0.00
Davisville a *1	95	58	71.3	0.00
Davisville b	96	47	69.9	0.08
Delano *1	102	56	73.8	0.00
Delta *1	105	51	71.0	1.52
Downey *1	96	54	71.8	0.00
Drytown	96	46	68.0	0.26
Duarte 1	99	52	67.0	0.00
Dunnigan *1	98	54	74.3	0.00
Dunsmuir *1	92	45	60.6	0.05
Edgwood *1	90	40	60.4	0.58
Eldorado *1	98	52	70.7	0.20
Elmira *1	103	50	70.8	0.08
El Verano *1	92	50	65.7	0.00
Emigrant Gap *1	87	39	60.2	0.10
Esparto *1	96	54	72.6	0.00
Evergreen	.....	.....	.....	T.
Exeter *1	98	60	81.0	0.00
Farmington *1	102	47	74.8	0.18
Felton *1	94	36	64.5	0.43
Florence *1	83	55	75.4	0.00
Florin *3	96	49	65.8	.....
Folsom City a *1	98	60	73.3	0.25
Folsom City b	.....	.....	.....	0.14
Fort Bidwell	90	35	61.9	0.91
Fresno *1	110	56	76.0	0.00
Fruto *1	100	52	68.2	0.00
Galt *1	97	54	71.3	0.10
Georgetown †	90	46	67.7	0.57
Gilroy *1	95	55	66.6	0.00
Girard *1	92	52	68.2	0.00
Glen Ellen *1	94	50	65.4	0.00
Grass Valley a	.....	.....	.....	0.23
Haywards *1	85	53	61.1	0.05
Hollister *1	98	44	63.0	0.02
Humboldt L. H.	.....	.....	.....	0.78
Huron *1	105	60	79.1	0.00
Independence a †	96	45	72.0	0.00
Independence b	104	58	79.2	0.00
Ione *1	98	50	68.6	0.11
Iowa Hill *1	97	54	69.6	0.51
Jackson	96	48	69.0	0.40
Julian †	92	46	69.4	0.00
Keeler *1	93	59	77.4	T.
Keene *1	95	51	67.3	0.00
Kennedy Gold Mine *1	94	50	68.2	0.38
King City *1	95	44	65.7	0.00
Kingsburg *1	100	58	76.5	0.00
Knights Landing *1	100	50	66.0	0.00
Lagrange *5	102	53	74.1	0.06
Lathrop *1	97	52	70.1	0.00
Laurel *1	91	49	65.4	0.29
Lime Point L H	.....	.....	.....	0.08
Livermore *1	98	50	65.6	0.45
Livingston *1	98	58	73.5	0.40
Lodi	97	47	67.8	0.25
Long Beach *1	90	49	64.3	.....
Los Angeles *1	93	53	71.7	0.00
Los Banos *1	92	60	71.9	0.00
Los Gatos a *1	90	48	63.7	0.04
Los Gatos b	92	46	66.1	0.00
Mammoth Tank *1	110	70	86.4	0.10
Martinez *1	84	46	64.6	0.00
Marysville a *1	90	61	73.5	0.20
Menlo Park *1	90	48	65.4	0.00
Merced *1	100	52	70.7	0.10
Milton (near) *4	98	53	68.1	0.25
Modesto a *1	98	61	73.3	0.00
Mohave *1	104	58	79.5	0.00
Monson *1	100	60	75.3	0.00
Montague *1	92	42	63.6	0.00
Monterey *1	78	50	61.4	1.25
Monterey (Hotel del Monte) *1	75	52	61.2	.....
Napa City a *1	90	45	62.2	0.02
Napa City b 1	88	46	62.9	T.
National City †1	88	53	66.9	0.09
Needles a †	108	64	87.3	T.
Needles b *†2	100	.....	83.6	.....
Nevada City *1	94	44	62.7	0.26
Newark *1	90	54	65.3	0.00
Newcastle †	95	48	69.7	0.06

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
California—Cont'd.	°	°	°	*Ins.*
Newman *1	100	61	74.5	0.00
Niles *1	80	45	67.0	0.00
Norwalk *1	94	55	68.2	0.00
Oakdale *4	100	51	67.9	0.21
Oakland a	83	49	63.0	0.04
Ogilby *1	115	84	96.5	0.00
Ontario *1	98	55	73.1	0.00
Orangevale †	97	44	69.2	0.16
Orland *1	105	54	73.1	0.00
Oroville *1	98	57	73.3	0.00
Pajaro *1	92	50	63.5	0.13
Palermo †	95	47	69.2	T.
Paso Robles *1	96	50	67.0	0.00
Petaluma *1	92	48	64.8	0.00
Pigeon Point	.....	.....	.....	0.04
Placerville a *1	96	45	66.5	0.20
Placerville b	89	41	62.4	0.03
Pleasanton a *1	94	40	63.8	0.10
Pleasanton b	94	33	62.2	0.09
Pt. Ano Nuevo L.H.	.....	.....	.....	0.10
Point Arena L. H	.....	.....	.....	0.10
Point Bonita L. H.	.....	.....	.....	0.36
Point George L. H	.....	.....	.....	0.95
Point Montara L. H.	.....	.....	.....	0.06
Point Pinos L. H.	.....	.....	.....	0.36
Point Reyes L. H.	.....	.....	.....	0.06
Point Sur L. H.	.....	.....	.....	0.38
Pomona *1	95	50	68.8	0.00
Puente *1	97	55	69.0	0.00
Ravenna *1	98	54	71.8	0.00
Red Bluff *1	101	53	74.2	0.22
Redding a *1	108	54	72.3	0.00
Redding b †	100	52	71.2	0.04
Redlands b *1	96	55	77.6	.....
Riverside b	99	43	70.0	.....
Rocklin *1	98	52	70.2	0.00
Rumsey *1	100	58	75.3	0.00
Sacramento a 1	86	42	60.6	0.20
Sacramento b *1	89	52	68.1	0.15
Sacramento c *1	82	55	67.4	0.13
Salinas b *1	72	52	59.8	0.16
Salton *1	117	74	92.9	0.00
Sanger Junction *1	105	55	75.4	0.00
San Ardo a *1	100	47	64.8	0.00
San Ardo b †	101	41	66.1	0.00
San Bernardino †	95	45	70.6	0.00
San Gabriel *1	95	57	71.0	0.00
San Jose a *1	87	48	64.2	0.00
San Jose b	87	38	62.2	T
San Pedro *1	87	60	69.6	0.00
Santa Ana *1	90	57	71.6	0.00
Santa Barbara a	86	50	64.2	0.00
Santa Barbara b *1	84	57	64.7	0.00
Santa Clara *6	87	45	63.0	0.00
Santa Cruz a *1	85	48	62.4	0.35
Santa Cruz b †	90	34	61.1	0.25
Santa Cruz L. H.	.....	.....	.....	0.29
Santa Margarita *1	96	43	68.7	0.00
Santa Maria	86	45	62.0	0.00
Santa Monica *1	80	58	64.5	0.00
Santa Paula *1	88	50	63.0	0.00
Santa Rosa *1	87	47	65.5	0.00
Selma *1	102	62	79.0	0.00
Shasta †	93	37	61.2	1.71
Shingle Springs *1	86	58	68.8	0.15
Sims *1	100	44	65.6	1.24
Sisson *1	95	40	60.3	1.71
Spadra *1	96	53	69.8	0.00
Stockton a	94	50	67.4	0.08
Stockton b *1	97	53	71.6	0.12
Suisun City *1	97	55	67.6	0.00
Sutter Creek *5	84	38	61.2	0.29
Tehachapi a *1	90	50	69.3	0.00
Tehachapi b	95	41	64.8	0.00
Tehama *1	102	52	75.5	0.00
Templeton *1	95	47	65.0	0.00
Towles *1	91	47	64.7	0.93
Tracy *1	92	52	70.7	0.00
Traver *1	99	50	73.5	0.00
Trinidad L. H.	.....	.....	.....	1.15
Tropico *1	93	53	67.5	0.00
Truckee *1	84	34	61.2	0.29
Tulare *1	97	60	76.6	0.00
Turlock a *5	97	58	77.2	0.00
Turlock b *1	100	50	70.5	0.13
Upper Lake	100	43	66.9	T.
Upper Mattole *1	91	44	62.9	1.61
Vacavillle a *1	98	53	70.1	0.07
Valley Springs *1	94	55	70.9	0.12
Ventura *†1	82	52	64.2	0.00
Vina *1	102	50	72.2	0.00
Volcano Springs *1	118	73	94.5	0.00
Walla Walla C'k *5	91	39	62.8	0.82
Walnut Creek	96	48	67.2	0.25
West Butte *	88	49	.....	.....
Westley *1	99	58	74.2	0.46
Wheatland	101	50	70.4	0.07
Whittier *1	98	58	74.8	0.00
Williams *1	98	52	73.2	0.00
Willows a †1	97	45	71.6	T.
Willows b *1	98	55	73.9	0.00
Winchester †	104	44	73.8	0.00
Woodland *1	95	52	69.9	0.00
Yreka †	93	44	64.6	0.61
Yuba City *5	92	60	75.6	0.20

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Colorado.	°	°	°	*Ins.*
Abbott	.....	.....	.....	T.
Alma †	72	19	47.7	0.00
Arboles	.....	.....	.....	0.00
Avoca	.....	.....	.....	1.09
Box Elder	.....	.....	.....	0.00
Brush	.....	.....	.....	0.05
Carson *†3	80	27	52.5	0.00
Castle Rock †	87	32	61.5	1.12
Cheyenne Wells *†1	94	33	62.9	T.
Chivington †	.....	.....	.....	1.10
Collbran	.....	.....	.....	0.00
Colorado Springs †	88	34	63.8	0.08
Como (near) †	72	23	52.6	0.15
Cope †	94	44	69.6	0.32
Cumbres †	72	21	49.1	0.00
Del Norte †	79	26	56.0	0.00
Delta †	95	30	63.4	0.00
Dillon †	.....	.....	.....	0.21
Downing †1	91	27	61.2	0.03
Dumont	.....	.....	.....	0.00
East Dale	.....	.....	.....	0.00
Fort Collins †	89	28	62.4	0.14
Fort Collins (near)	.....	.....	.....	0.20
Fruita †	90	36	65.0	T.
Garnett	.....	.....	.....	0.00
Gaynor	.....	.....	.....	0.09
Georgetown †	78	31	59.0	0.00
Glen Eyrie †	82	37	6.8	0.04
Gold Hill	.....	.....	.....	0.18
Grand Junction †	88	46	69.8	0.00
Greeley †	88	33	63.2	0.03
Greenhorn †	87	34	62.4	T.
Grover †	88	31	62.3	0.00
Husted †	93	30	64.2	0.11
Idaho Springs †	81	28	57.8	T.
Julesburg †	95	34	61.0	0.81
La Jara †	86	35	61.0	0.19
Lamar †	99	36	70.7	0.11
La Porte	.....	.....	.....	0.00
Lavender	.....	.....	.....	0.00
Le Roy *†2	95	37	64.7	0.84
Leslie	.....	.....	.....	0.15
Livermore	83	32	61.8	0.60
Loveland	.....	.....	.....	0.13
Meeker †	86	30	59.4	T.
Middle Box Elder	.....	.....	.....	0.28
Minneapolis †	95	37	67.2	0.18
Monte Vista a	83	30	55.7	0.00
Mornine †	78	21	55.6	0.06
Orchard 4	99	29	65.0	0.00
Pagoda (near) †	86	22	56.2	0.00
Paonia †	.....	.....	.....	0.00
Parachute †	89	38	63.8	0.09
Red Cliff	.....	.....	.....	T.
Rico	.....	.....	.....	0.72
Robb †	93	34	66.2	0.74
Rocky Ford †	98	36	68.8	0.00
Saint Cloud	.....	.....	.....	0.00
Sanborn	.....	.....	.....	0.00
San Luis †	85	26	56.0	0.01
Seibert	.....	.....	.....	0.15
Smoky Hill Mine †	88	28	61.8	0.17
Stamford	.....	.....	.....	T.
Thon †	97	33	66.4	0.80
Twin Lakes	.....	.....	.....	0.00
Vilas	.....	.....	.....	T.
Wallet †	.....	.....	.....	T.
Ward District	.....	.....	.....	0.00
Yuma	.....	.....	.....	0.35
Zuck	.....	.....	.....	0.90
Connecticut.				
Canton	79	37	59.7	2.53
Colchester	78	38	60.5	1.34
Falls Village	.....	.....	.....	3.45
Hartford b	.....	.....	.....	1.90
Lake Konomoc	.....	.....	.....	1.51
Lebanon	.....	.....	.....	2.27
Middletown	82	38	62.4	2.24
New Hartford a *†1	77	31	53.8	3.08
New Hartford b	.....	.....	.....	2.56
North Franklin	.....	.....	.....	2.03
N. Grosvenor Dale 1	78	34	57.6	1.80
North Woodstock	.....	.....	.....	2.40
Norwalk b	80	37	59.8	2.30
South Manchester	.....	.....	.....	1.81
Stevenson	.....	.....	.....	2.84
Storrs 1	78	40	59.1	1.40
Thompson *1	75	42	58.6	.....
Voluntown †1	77	33	58.5	2.83
Wallingford †	.....	.....	.....	2.16
Waterbury	78	38	61.3	2.62
West Simsbury	.....	.....	.....	2.01
Delaware.				
Dover †1	87	49	66.3	2.71
Kirkwood *2	88	.....	69.5	.....
Seaford †	90	44	66.8	1.81
District of Columbia.				
Dist'ing Reserv'r *5	84	50	65.6	4.85
Long Bridge †	.....	.....	.....	2.85
Rec'ing Reserv'r *5	83	51	66.0	4.10
West Washington. 1	89	46	68.2	3.63
Florida.				
Amelia †	86	69	76.7	10.35
Avon Park *†1	88	70	75.2	10.01
Bristol †	94	60	78.1	4.00

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Florida—Cont'd.	°	°	°	*Ins.*
Brooksville †	90	62	77.6	9.77
Clermont †[1]	90	72	80.6	5.88
Eustis †[1]	93	63	76.5	8.07
Federal Point †	91	66	76.8	13.51
Fort Meade †	89	66	78.0	7.12
Gainesville †	91	63	78.4	8.16
Grasmere	90	66	78.2	.....
Green Cove Sp'gs †	92	68	78.3	15.83
Homeland †[1]	91	64	76.1	9.01
Hypoluxo *†[2]	89	73	78.4	17.34
Kissimmee City †	.....	68	.....	13.66
Manatee †[1]	91	68	78.0	8.51
Merritts Island †	89	72	80.0	8.04
Mullet Key †[1]	94	74	79.6	4.81
Myers †[1]	89	70	77.5	13.66
Ocala *†[1]	89	68	76.3	15.56
Orange City †	94	64	79.6	9.01
Orlando †	94	68	80.2	9.12
Plant City †	93	65	79.4	.....
St. Francis B'ks	88	63	77.2	14.50
St. Petersburg †[1]	91	70	79.0	8.36
Tallahassee †[1]	87	61	74.0	3.00
Tarpon Springs †	91	67	79.0	8.15
Georgia.				
Adairsville †	89	47	70.4	2.94
Alapaha †	90	58	75.2	4.79
Albany †	92	58	76.0	1.43
Americus †	92	53	74.0	2.85
Athens *a*[1]	84	50	70.3	2.56
Athens *b* †	86	45	70.2	3.17
Bainbridge †	98	56	75.9	5.69
Blakely †	91	57	75.8	3.25
Camak †	90	50	71.4	5.60
Canton †	.....	.....	.....	1.63
Columbus †	88	58	74.3	1.14
Cordele †	92	50	73.9	2.71
Dahlonega †	82	46	67.8	3.64
Darien †	96	63	78.4	20.05
Diamond †	83	43	66.0	2.08
Dublin †	91	51	73.4	3.56
Eastman †	94	60	77.6	2.30
Elberton †	.....	.....	.....	3.70
Fleming †	87	.....	.....	12.46
Forsyth *[1]	92	58	75.2	3.36
Fort Gaines †	90	54	74.1	1.56
Gainesville †	88	46	70.4	2.71
Gillsville *†[1]	84	55	71.0	2.30
Griffin †	84	52	70.8	2.36
Hawkinsville †	87	46	69.9	4.09
Hephzibah *†[3]	85	58	72.1	6.00
Homerville †	89	56	76.4	6.91
Lafayette †	86	47°	68.8°	4.49
Lagrange †[1]	85	50	71.9	2.77
Louisville †	97	52	74.2	5.59
Lumpkin †	89	55	74.0	4.47
Macon †	88	54	71.4	1.57
Marietta †[1]	83	48	67.2	3.06
Marshallville †	88	48	69.9	4.14
Milledgeville †	86	50	71.8	7.17
Millen †	92	48	73.8	9.56
Morgan †	86	64	76.4	2.01
Newnan †	85	44	69.6	5.22
Piscola	89[4]	62°	76.4°	4.92
Point Peter *[1]	86	48	71.2	3.65
Poulan †[1]	92	56	74.7	2.29
Quitman *b* †	90	60	76.4	3.61
Resaca †	.....	.....	.....	3.52
Rome †	84	49	69.2	4.07
Thomasville †	91	59	76.8	3.46
Toccoa †	86	48	69.0	4.01
Union Point †	87	50	70.2	2.53
Washington †	87	50	71.4	1.20
Way Cross †	90	62	75.7	7.51
Waynesboro †	92	49	72.2	4.41
West Point †	86	60	74.6	3.65
Idaho.				
American Falls †	90	31	60.1	0.00
Boise Barracks	94	34	63.0	0.18
Fort Sherman	84	31	58.6	1.26
Garden Valley [1]	89	35	60.1	2.34
Henrys Lake †	80	20	51.6	0.65
Kootenai †[1]	79[5]	30	55.2	5.10
Moscow *†[1]	84	36	61.8	0.55
Payette †	92	36	64.4	0.60
Illinois.				
Alton †	.....	.....	.....	2.50
Aurora *a* †	90	36	61.4	2.36
Aurora *b* †	90	40	62.9	2.53
Beardstown †	.....	.....	.....	2.47
Bloomington †	94	40	66.4	2.70
Bushnell †	93	42	67.2	2.11
Carlinville †	90	42	67.3	2.23
Chester †	.....	.....	.....	1.75
Decatur *†[1]	82	43	65.3	2.95
Dixon †[1]	92	34	61.5	2.56
East Peoria [1]	89	32	63.2	2.61
Effingham †[k]	90	34	64.4	0.49
Ellsworth †	92	39	65.2	3.00
Fairmount †	86	42	66.4	0.50
Fort Sheridan	87	40	60.2	1.67
Greenville [1]	95	45	67.5	2.08
Griggsville †	88	42	66.0	3.46
Havana †	90	45	67.0	3.01
Hennepin †	92	37	63.2	1.25
Irishtown	.....	.....	.....	1.09
Jordans Grove †	90	42	69.0	2.59
Kankakee †	81	44	62.2	2.03
Lagrange †	87	44	62.5	1.70
Louisville *[2]	92	40	64.7	0.50
Manchester *[2]	.....	48	62.6	.....
Martinsville †	89	34	66.7	0.77
Mascoutah *	91	42	.....	1.40
Mattoon	89	49	68.4	1.20
Mount Carmel †	.....	.....	.....	1.80
Muddy Valley *[2]	95[d]	54[d]	66.8[d]	0.61
New Haven †	.....	.....	.....	2.44
Olney *a* *[1]	90	41	69.2	0.76
Olney *b* *[1]	93	42	64.6	0.67
Oswego *[1]	80	42	60.9	2.32
Ottawa †[1]	91	41	63.3	2.56
Palestine †[1]	89	36	65.4	1.60
Pana *[1]	90	52	68.2	3.25
Peoria *a* †	.....	.....	.....	2.37
Peoria *b* [1]	92	44	65.9	2.35
Philo †[1]	91	31	64.6	1.16
Rantoul *[1]	88	41	64.3	0.93
Riley †	86	41	61.7	1.43
Rockford [1]	87	43	61.7	1.61
Rushville	94	45	67.6	3.18
Saint John *[2]	90	54	70.5	0.56
Shawneetown †	.....	.....	.....	2.30
Sycamore *[1]	82	45	62.8	1.62
Walnut †	93	39	66.7	3.42
Warsaw †	.....	.....	.....	2.50
Watseka [2]	.....	.....	62.1	2.51
White Hall *[4]	86	41	62.4	1.99
Winnebago †[1]	87	39	60.6	1.74
Indiana.				
Angola [1]	88	44	64.8	3.12
Ashboro *†[4]	88	37	66.9	1.83
Butlerville *[2]	86	36	65.1	3.67
Cambridge City †	85	41	63.7	4.09
Columbia City *[6]	86	38	63.7	4.27
Columbus *[1]	86	44	65.6	2.90
Connersville †	85	37	64.6	2.27
Degonia Springs *[6]	87	45	67.7	5.51
Evansville †	.....	.....	.....	1.85
Farmland *[1]	84	38	64.8	3.05
Hammond *†	88	40	64.8	2.52
Hawpatch *†[1]	83	45	63.4	2.52
Huntingburg *[1]	90	50	70.5	8.00?
Huntington †	.....	.....	.....	4.87
Irvington *†[3]	88	42	63.0	2.00
Jeffersonville [1]	86	45	67.4	2.64
Lafayette †	89	34	65.4	1.22
Logansport *a* †	.....	.....	.....	1.92
Logansport *b*	91	39	64.6	1.32
Mauzy	85	36	64.6	1.31
Michigan City [1]	92	44	65.0	3.36
Mount Vernon *a* †	.....	.....	.....	1.48
Mount Vernon *b* [1]	87	44	66.[7]	1.48
New Albany *†[1]	87	52	71.[2]	3.05
Point Isabel †	91	35	67.[1]	5.20
Princeton *†[1]	90	43	66.9	1.70
Rockville	91	36	68.2	1.70
Rushville †	.....	.....	.....	1.98
Seymour †	89	42	67.4	2.13
Terre Haute †	.....	.....	.....	1.38
Vevay [1]	89	44	66.9	2.42
Vincennes †	.....	.....	.....	2.39
Worthington †	86	39	64.2	1.77
Indian Territory.				
Eufaula †	.....	.....	.....	1.34
Fort Supply	96	44	71.2	1.15
Healdton †	98	58	71.6	2.02
Lehigh †	104*	48*	74.2*	2.40
Pauls Valley †	95	48	73.0	1.30
Purcell †	105	49	76.0	0.75
South McAlester †	94	52	74.4	2.72
Tulsa †	.....	.....	.....	1.30
Iowa.				
Algona *[1]	86	46	63.8	0.35
Alta *a* † [1]	89	34	62.8	0.70
Amana †	87	39	63.2	1.88
Ames *b* [1]	95	35	65.2	0.16
Ames *c*	.....	.....	.....	0.18
Atlantic †[1]	99	29	64.6	0.79
Belle Plaine [1]	89[1]	36[1]	63.6[1]	2.13
Blockton †	92	35	66.0	2.29
Bonaparte †[1]	91	44	66.7	3.40
Carroll †	88	38	64.8	0.70
Cedar Falls †	92	34	63.8	1.19
Cedar Rapids †	90	45	67.4	2.33
Centerville †.	91	33	63.1	1.07
Charles City †	86	33	62.8	1.48
Clarinda †[1]	93	42	68.9	0.63
Clinton [1]	88	40	62.0	1.20
College Springs	92	39	68.8	1.24
Corning *b* †	91	37	66.2	2.86
Cresco †[1]	87	36	60.8	1.22
Decorah †	87	39	62.1	1.85
Delaware *[3]	90	44	66.0	4.15
Denison †[1]	90	37	65.2	1.56
Eagle Grove *[3]	.....	38	62.3	0.35
Emerson	.....	.....	.....	0.79
Emmetsburg	.....	.....	.....	2.29
Fairfield †[1]	91	40	64.6	0.83
Fayette †	90	33	62.6	2.06
Fort Madison *†[1]	83	51	69.0	3.26
Glenwood †	96	38	70.3	0.79

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Iowa—Cont'd.	°	°	°	*Ins.*
Grand Meadow *[1]	83	44	61.5	1.28
Grinnell †	86	40°	64.2°	1.86
Grundy Center [1]	90	38	62.2	0.89
Hampton [1]	90	39	61.8	0.88
Hawkeye	.....	.....	.....	1.54
Hopeville †	90	38	66.4	1.86
Independence †[1]	90	38	62.5	1.87
Indianola †[4]	93	39	66.3	1.43
Iowa City †	92	38	64.2	1.18
Iowa Falls †[1]	92	36	62.4[e]	0.21
Keosauqua †	93	43	67.7	2.33
Larrabee †	88	33	63.5	0.99
Le Claire †	.....	.....	.....	2.49
Logan †[1]	95	36	69.3	2.00
Maquoketa *[1]	90	42	61.6	1.08
Marshalltown †	86	42	63.4	1.03
Mason City †	85	44	65.0	1.31
Maxon *[1]	93	46	66.1	1.95
Mechanicsville	87	42	62.0	0.96
Monticello *†[1]	88	36	61.5	2.06
Mocar [1]	92	36	68.0	1.75
Mount Ayr †	91	37	67.7	2.84
Mount Pleasant *a* [2]	80	.....	62.0	1.81
Murray †	92	38	66.7	1.82
Oskaloosa †[1]	94	39	64.8	1.66
Panama †	93	37	65.3	2.23
Richland *[2]	.....	43	61.8	0.76
Spirit Lake †	89	37	62.3	0.70
Storm Lake †	86	38	65.3	0.67
Tipton	90°	40°	63.8°	1.80
Vinton *[1]	89	38	62.6	2.62
Washington	92	44	66.6	1.59
Webster City *[1]	90	34	64.0	1.00
Williams *[1]	92	36	60.7	0.22
Winterset †	96	39	66.1	1.74
Kansas.				
Abilene †	96	42	71.2	1.97
Allison *†[3]	93	41	64.6	0.05
Altoona *†[3]	91	44	64.0	0.97
Arkalon †	97	40	70.6	0.62
Atchison †	93	45	70.4	1.23
Bucklin	.....	.....	.....	0.25
Buffalo Park *	92	54	.....	.....
Burr Oak *	94	39	.....	0.00
Cawker City *[1]	88	40	69.5	0.00
Colby	92	36	65.7	0.02
Coldwater †	95	46	72.0	0.67
Collyer *[1]	100	46	67.7	T.
Columbus †	94	40	70.1	0.69
Cunningham †[1]	97	44	69.0	1.54
Downs	.....	.....	.....	0.34
Elco *[1]	93	45	70.4	1.20
Elk Falls †	.....	.....	.....	0.99
Emporia †[1]	89	46	69.8	1.75
Englewood * [1]	99	45	72.0	0.85
Eureka Ranch †	96	36	67.4	0.07
Fort Riley	95	40	68.6	1.61
Gibson	98	40	67.4	1.03
Gove City *†[1]	100	40	67.9	0.51
Grainfield *[1]	93	47	65.8	.....
Greensburg †	95	47	70.4	0.28
Grenola *[1]	96	44	72.0	1.80
Grinnell *[1]	90	36	74.5	.....
Havensville *†[1]	94	40	68.5	1.70
Hays City †	98	37	70.2	0.40
Horton †	92	41	69.1	0.80
Hutchinson †	97	44	71.8	0.79
Independence †	96	46	72.4	0.82
Kansas City †[1]	92	39	68.3	3.40
Kellogg	97	44	72.5	3.99
Kiowa †	99	50	74.0	1.45
Kirwin †	.....	.....	.....	0.00
La Crosse †	97	45	71.2	0.61
Lakin †	102	39	69.3	0.03
Lawrence	91	43	68.0	2.32
Lebo †	93	39	68.4	1.91
Macksville *†[1]	104	51	78.7	2.00
McPherson †	95	42	70.8	1.11
Manhattan *a* †	.....	.....	.....	0.35
Manhattan *b* [1]	97	37	69.7	0.36
Manhattan *c* *[1]	94[e]	36	68.3[e]	0.39
Mankato †[1]	96	45	75.5	1.00
Marion †[1]	94	41	68.2	2.69
Marmaton *..[1]	94	43	.....	1.18
Minneapolis *[1]	92	46	69.8	0.40
Monument *[1]	96	48	70.8	.....
Morland †	101	36	67.9	0.03
Morse †	95	39	68.3	2.35
Morton †	97	42	71.6	0.12
New England Ranch	94	36	66.0	0.00
Oberlin †	.....	.....	.....	0.06
Page City *[1]	99	45	63.4	.....
Pauline *[1]	93	41	69.4	1.12
Pleasant Dale *[1]	99	40	68.8	0.83
Quinter *[1]	92	54	71.6	.....
Rome *†[1]	92	49	70.7	3.38
Salina *†[1]	88	51	70.7	0.83
Sedan †[1]	96	48	71.6	1.35
Seneca †[8]	95	41	71.7	0.00
Shields †	97	35	63.8	1.25
Sterling †	93	44	71.8	1.72
Topeka	94	38	68.2	0.90
Tribune †	94	37	68.4	0.03
Ulysses †	103	45	71.4	0.50
Wakefield *[1]	100	48	72.0	0.69
Wa Keeney *[1]	92	54	68.4	1.50
Wallace *a* †	.....	.....	.....	0.00
Wallace *b* *[1]	96	50	68.4	.....
Yates Center †	92	41	69.0	2.31
Kentucky.				
Bowling Green †	.....	.....	.....	4.12
Caddo †[1]	89	49	71.2	3.25
Canton *†[1]	92	45	67.4	2.10
Carrollton *†[1]	88	45	65.4	0.31
Catlettsburg *†[5]	83	.....	71.6	2.56
Central City †[4]	90	38	65.0	3.71
Cloverport	.....	.....	.....	1.48
Earlington	88	48	70.2	3.77
Falmouth †	.....	.....	.....	2.40
Frankfort †	.....	.....	.....	2.70
Franklin *†[1]	88	52	69.8	5.11
Grand Rivers	90	40	68.2	3.03
Greensburg *†[1]	89	45	67.3	3.20
Harrodsburg †[1]	89	38	65.6	4.25
Lagrange †	90[m]	46[l]	67.6[m]	1.63
Louisa †	.....	.....	.....	1.97
Matlock *[1]	88	52	68.7[g]	4.91
Middlesboro [1]	86	41	64.6	1.44
Mount Sterling †[1]	87	40	63.8	5.18
Munfordville †[2]	.....	.....	65.2[d]	3.05
Paducah *a* †	.....	.....	.....	0.04
Paducah *b* †[1]	89	53	71.3	0.97
Pellville †	91	43	68.6	3.05
Princeton †	91	42	68.6	3.12
Richmond †[1]	88	49	73.3	2.45
Robard	.....	.....	.....	0.11
Russellville *†[1]	85	47	66.6	2.93
Shelby City	.....	.....	.....	4.58
Shelbyville †[1]	93	39	66.8	2.20
South Fork †[2]	.....	.....	62.6	2.05
Springfield †	96	34	66.2	2.65
Verona	.....	.....	.....	2.72
Wickliffe *†[1]	87	50	68.3	1.18
Williamsburg *a* †	.....	.....	.....	2.30
Williamsburg *b* †	87	41	67.4	1.65
Louisiana.				
Abbeville	94	55	76.2	3.35
Alexandria †	92	44	71.0	0.30
Amite †	94	52	74.6	0.02
Baton Rouge †	89	57	74.3	1.55
Cameron †	99	50	75.9	1.95
Cheneyville †	92	52	74.2	1.40
Clinton [4]	100	64	82.8	1.70
Coushatta *a* †	.....	.....	.....	2.36
Coushatta *b* †	95	48	72.6	2.45
Covington †	93	54	75.6	1.52
Davis	91	45	70.4	1.83
Delhi †	.....	.....	.....	1.62
Donaldsonville †	90	64	77.0	3.50
Emilie †	89	64	76.5	6.39
Farmerville *	90	51	70.8	5.42
Franklin †	91	56	76.4	1.00
Girard †	.....	.....	.....	2.09
Grand Coteau	90	57	75.2	0.60
Hammond	.....	.....	.....	2.20
Homer †	87	52	70.7	4.76
Houma †	91	58	75.2	3.06
Lafayette †	95	53	74.8	1.33
Lake Charles †	91	54	72.8	0.70
Lawrence †	89	63	76.6	7.85
Liberty Hill	96	49	73.6	3.83
Marksville †	92	50	73.4	T.
Maurepas	90	55	73.6	6.68
Melville †	94	58	77.4	0.63
Minden †	92	52	73.6	2.02
Monroe †	90	53	73.5	3.95
Natchitoches †	89	52	71.3	2.20
New Iberia	89	57	75.0	1.21
N. La. Ex. Station	89	49	72.0	5.01
Opelousas †	90	54	74.6	0.57
Paincourtville	92	57	75.7	2.60
Plain Dealing	90	49	70.7	1.66
Rayne †	94	51	74.8	1.18
Schriever †	94	56	75.4	2.56
Shell Beach [7]	91	60	75.4	0.95
Sugar Ex. Station †	94	59	76.4	5.95
Wallace	93	60	76.0	6.94
Winnsboro	95	40	69.0	0.80
Maine.				
Bar Harbor	72	43	.....	1.79
Belfast *[6]	70	46	58.5	2.70
Bethel	76	30	.....	2.63
Calais	76	37	57.8	1.71
Cornish *[1]	78	44	57.8	2.76
East Machias †	70	36	55.6	1.96
Fairfield	77	34	58.8	3.23
Farmington †	83	29	57.6	4.16
Houlton †	81	30	56.1	3.65
Kents Hill	74	39	58.4	4.98
Lewiston [1]	75	37	58.7	4.48
Mayfield	77	30	53.7	5.63
Orono †[1]	76	37	57.7	3.91
West Jonesport *[1]	70	41	56.0	.....
Maryland.				
Barren Cr'k Sp'gs †[1]	84	48	65.8[d]	2.14
Boettcherville *[1]	88	40	64.0	2.90
Cumberland *a* †	83	45	64.0	2.36
Cumberland *b*	87	47	66.6	2.25
Darlington †	85	45	64.2	2.77
Easton †	85	47	65.7	1.84

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Maryland—Cont'd.	°	°	°	*Ins.*
Edgemont †	98	46	69.2	.....
Fallston *[1]	85	48	63.7	3.28
Frederick [1]	88	47	65.0	5.82
Great Falls *[5]	86	47	65.3	2.04
Jewell *[2]	80	55	67.8	3.08
Leonardtown †	84	51	66.2	2.29
McDonogh	84	49	64.4	3.32
Mt. St. Marys Col †	85	48	67.2	5.52
New Market *[1]	86	48	63.2	3.77
Solomons †[1]	84	54	68.8	1.57
Taneytown †	.....	.....	.....	2.44
Woodstock [1]	85	44	63.3	3.80
Massachusetts.				
Adams *a*	78	35	58.2	.....
Amherst [1]	77	34	59.2	1.82
Amherst Ex. St'n *a* [1]	79	34	59.4	1.53
Amherst Ex. St'n *b*	80	31	59.3	2.16
Andover [1]	88	40	57.7	0.65
Ashland	.....	.....	.....	3.09
Beverly Farms [1]	75	40	58.8	2.13
Blue Hill (sum't)	77	43	60.4	2.31
Blue Hill (valley)	83	33	59.4	2.06
Boston	.....	.....	.....	1.81
Cambridge *a*	80	38	61.8	2.18
Chestnut Hill	80	40	62.3	2.16
Clinton	.....	.....	.....	1.35
Concord *a* †	80	34	59.8	2.43
Concord *b*	78	36	58.6	2.80
Cotuit	75	40	60.5	2.22
Dudley [1]	81	42	60.1	2.58
Egg Rock, Nahant	74	47	60.0	.....
Fall River *a* *[1]	77	49	63.2	3.44
Fiskdale	.....	.....	.....	1.56
Fitchburg *a* *[1]	76	41	58.5	1.75
Fitchburg *b*	81	38	59.9	1.55
Florida *b* †	75	34	55.2	2.16
Framingham	80	34	60.4	2.59
Gilbertville	78	32	57.8	1.99
Groton	78	40	60.4	1.60
Heath *[6]	80	38	58.2	.....
Hyannis *[1]	81	44	65.4	2.06
Kendall Green	79	35	60.2	2.60
Lake Cochituate	82	30	60.0	2.87
Lawrence	81	38	61.6	2.37
Leicester	76	42	59.1	1.28
Leominster	.....	.....	.....	1.76
Long Plain *[6]	76	38	61.9	3.56
Lowell *a*	78	37	60.6	1.97
Lowell *b*	81	34	60.3	.....
Lowell *c*	84	36	61.5	.....
Ludlow *a*	77	31	57.1	1.80
Lynn *a*	78	41	60.4	1.65
Lynn *b* *[1]	85	40	60.0	.....
Mansfield *[1]	84	38	58.7	2.35
Middleboro	78	32	60.0	2.54
Milton *[1]	77	38	57.4	1.95
Monroe	77	31	55.3	2.60
Monson	79	37	59.1	2.58
Mount Nonotuck	.....	.....	.....	1.67
Mystic Lake	.....	.....	.....	2.13
Mystic Station	.....	.....	.....	1.88
New Bedford *a* *[1]	74	42	60.4	3.63
New Bedford *b*	75	35	60.4	3.54
Newburyport *a*	82	37	.....	1.94
Newburyport *b*	.....	.....	.....	3.02
Northampton	88	38	62.6	1.58
North Billerica	82	37	61.8	3.03
Plymouth *	77	50	.....	2.41
Princeton	78	39	58.6	1.63
Provincetown	75	44	62.7	2.21
Randolph	.....	.....	.....	2.69
Roberts Dam	.....	.....	.....	1.99
Roxbury	77	42	60.7	2.21
Royalston *[1]	80	42	59.2	1.50
Salem *b*	.....	.....	.....	1.61
Somerset *[1]	82	42	64.1	3.10
South Hingham	.....	.....	.....	2.68
Springfield Armr'y	80	39	61.7	1.89
Taunton *a* [1]	82	37	60.6	2.75
Taunton *c*	81	32	59.7	2.76
Taunton *d* [1]	83	33	59.9	2.87
Turners Falls	75	38	59.5	2.60
Wakefield	79	36	60.3	1.87
Waltham	.....	.....	.....	2.32
Webster	.....	.....	.....	2.32
Westboro †	81	35	61.0	1.96
Williamstown [1]	75	36	58.4	1.68
Winchester	.....	.....	.....	1.88
Worcester *a*	76	42	60.2	.....
Worcester *b*	80	42	62.0	1.74
Michigan.				
Adrian	88	38	63.0	6.13
Albion [1]	83	41	62.6	2.42
Allegan	87	40	62.7	3.56
Alma	86	35	59.4	3.18
Ann Arbor	84	44	62.0	4.72
Arbela	75	45	58.1	4.03
Ball Mountain	82	41	60.2	4.02
Bear Lake	83	33	58.5	3.65
Bellaire	84	28	56.0	2.54
Benton Harbor	89	42	63.2	3.36
Berlin *[1]	89	37	63.0	2.65
Birch Run	86	32	60.4	3.45
Birmingham [1]	87	40	59.2	6.20
Boon [1]	82	37	57.4	2.07
Bronson	88	35	63.1	2.29
Brown City	.....	.....	.....	5.13
Caldwell	86	36	59.1	4.00
Calumet	84	41	57.1	1.87
Clinton	87	39	63.0	4.83
Crystal Falls	88	30	57.2	1.06
Evart *[2]	84	34	58.3	4.56
Fairview	85	41	61.3	3.29
Fitchburg	88	36	61.0	2.74
Flint	88	34	61.0	3.29
Fremont	82	39	60.6	1.89
Gaylord	87	32	57.6	2.44
Glenwood	80	41	60.0	3.16
Grand Rapids [1]	87	40	63.0	1.78
Grape	86	44	64.0	4.05
Grayling	84	28	56.6	1.63
Hanover	85	43	62.3	3.84
Harbor Springs	84	35	58.2	2.03
Harrison	87	37	60.2	3.94
Harrisville	87	37	58.1	2.56
Hart	80	40	60.2	3.15
Highland Station	.....	.....	.....	3.92
Hillsdale *[1]	84	45	63.0	3.53
Howell	88	36	61.3	3.02
Ivan	88	38	59.2	3.00
Jackson *	86	39	.....	.....
Jeddo	85	39	61.8	5.52
Kalamazoo	86	44	63.0	2.42
Lake City *[1]	79	46	60.2	2.94
Lansing [1]	87	40	61.0	2.80
Lathrop *[1]	84	30	58.4	1.03
McMillan	78	27	55.6	1.12
Madison	84	43	61.6	6.07
Marshall [1]	86	39	61.2	3.79
Mayville	88	36	61.5	3.42
Mottville	91	38	63.8	2.45
Noble	76	46	61.1	3.24
North Marshall	85	35	59.6	2.86
Ovid	84	38	60.3	2.46
Paris	86	30	58.7	2.39
Parkville	.....	.....	.....	3.45
Rawsonville	86	45	63.4	6.11
Rockland [1]	87	30	58.9[e]	2.08
Saint Ignace	82	37	56.3	1.55
Sand Beach	85	38	61.2	4.77
Stockbridge	.....	.....	.....	2.59
Thornville [1]	87	42	62.6	4.77
Vandalia	84	42	62.7	2.80
Vienna	.....	.....	.....	2.46
Washington	88	36	61.4	4.71
Weldon Creek	85	30	59.8	3.51
White Pigeon *[2]	86	36	60.6	2.49
Williamston [1]	87	44	63.2	3.06
Ypsilanti	86	40	61.6	5.97
Minnesota.				
Albert Lea † [1]	85	38	61.2	2.12
Alexandria †	.....	.....	.....	0.24
Alma City † [1]	85	36	60.9	1.70
Ash Creek †	92	28	62.2	0.31
Bird Island	86	37	60.9	3.82
Blooming Prairie	.....	.....	.....	2.05
Cambridge †	84	30	59.2	0.31
Camden †	94	36	61.6	2.30
Canton †	85	41	62.0	1.14
Clear Lake *[1]	80	45	60.0	.....
Crookston †	90	31	60.2	0.29
Eagle Bend †	.....	30	.....	0.40
Farmington [1]	84	36	61.7	2.93
Fergus Falls * † [1]	89	39	60.8	0.99
Fort Ripley †	.....	.....	.....	1.02
Grand Meadow *[1]	85	40	58.5	1.38
Granite Falls	99	34	63.2	0.95
Kinbrae † [1]	92	33	61.7	1.24
L Winnibigoshish *[1]	83	40	57.8	2.40
Leech Lake [1]	82[a]	31	56.9	0.80
Long Prairie *[4]	.....	32	56.2	.....
Maple Plain * [3]	84	38	59.8[d]	1.30
Minneapolis † [1]	84	40[k]	61.1	1.54
Montevideo †	97	35	62.0	0.18
Morris [1]	92	38	62.2	0.28
Northfield † [1]	84	39	61.4	3.63
Ortonville †	.....	.....	.....	0.24
Pine River *[1]	81	42	59.2	0.57
Pokegama Falls [1]	83[a]	22	57.4	1.20
Princeton † [1 d]	90	30	62.3	0.30
Redwood Falls †	.....	.....	.....	1.88
Rolling Green †	82	40	60.8[e]	1.22
Saint Charles † [1]	84	33	60.2	2.41
Saint Oloff [1]	89	36	59.5	0.50
Sandy Lake Dam [1]	83[a]	33	57.7	0.70
Sheldon [2]	.....	.....	59.5	2.55
Wabasha [2]	.....	.....	62.8	2.30
Mississippi.				
Aberdeen †	88	45	68.5	4.30
Agricult'ral Col'ge	87	53	72.4	1.94
Batesville †	88	46	69.4	0.13
Brookhaven †	95	47	73.3	1.67
Canton †	89	53	71.6	2.04
Clarksdale	.....	.....	.....	0.88
Columbus *a* †	.....	.....	.....	2.15
Columbus *b* †	95	49	73.0	2.42
Corinth †	86	48	69.8	6.33
Crystal Springs †	93[d]	51[d]	73.4[d]	1.91
Duck Hill †	87	48	70.0	2.62
Edwards †	91	52	73.7	1.92

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Mississippi—Cont'd.	°	°	°	*Ins.*
Enterprise †	91	48	71.7	2.27
Fayette †	90	52	72.8	1.19
Greenville	89	55	72.4	6.96
Hattiesburg *† [1]	97	64	77.8	1.84
Hazlehurst †	93	35	71.8	1.99
Hernando †	92	49	72.2	1.06
Holly Springs †	88	50	70.3	1.11
Jackson †	93	50	71.6	0.05
Kosciusko †	88	49	70.4	0.20
Lake †	90	48	69.2	0.98
Logtown †	89	58	75.9	3.79
Louisville †	90*	46	70.3	1.43
Macon †	93	52	73.0	2.89
Moss Point †	91	58	76.1	4.05
Natchez †	94	55	75.0	2.83
Okolona †	90	48	70.0	5.68
Palo Alto †	88	53	71.2	4.33
Pontotoc † [1]	86	48	70.0	9.10
Port Gibson †	95	44	73.0	1.92
Ship Island †	90	68	79.6	5.59
Vaiden † [1]	98	47	71.5	3.09
Water Valley *[1]	96	49	70.4	1.01
Waynesboro *b* †	94	50	74.6	3.33
Yazoo City †	.....	.....	.....	2.14
Missouri.				
Adrian †	95	32	65.0	2.25
Appleton City †	93	40	70.2[f]	2.04
Ava	.....	.....	.....	1.96
Bethany [1]	93	39	68.9	3.55
Big Piney	.....	.....	.....	3.42
Boonville †	.....	.....	.....	4.34
Brunswick	90	44	68.8	2.30
Canton	.....	.....	.....	2.31
Cape Girardeau †	.....	.....	.....	0.35
Carrollton †	92	51	68.8	3.09
Carthage	.....	.....	.....	1.47
Chillicothe *a*	97	41	72.7	1.47
Clinton *[1]	90	43	68.4	2.76
Conception [1]	86	43	69.2	2.05
Concordia *	96	.....	.....	4.52
Cowgill	.....	.....	.....	3.24
Dadeville †	.....	.....	.....	1.15
Darksville †	90	48	68.2	3.13
East Lynne *[1]	90	41	69.1	3.63
Eldon *[1]	94	44	67.2	4.07
Excelsior Spr'gs *† [1]	89	42	65.8	2.33
Fayette	92	43	69.1	4.31
Fox Creek *[1]	88	50	68.1	2.65
Fulton	.....	.....	.....	4.78
Gainesville	89	42	67.0	0.96
Gallatin *[1]	90	47	71.1	1.35
Galt	.....	.....	.....	1.00
Gayoso	.....	.....	.....	0.45
Glasgow [1]	94	44	68.4	4.97
Glensted *	96	.....	.....	2.21
Gordonville *† [1]	88	44	67.9	0.53
Gorin	.....	.....	.....	3.25
Grove Dale	90	44	68.8	3.37
Harrisonville †	95	39	67.6	2.91
Hermann *† [2]	85	47	65.2	3.40
Houston	89	40	68.2	3.10
Independence	.....	.....	.....	5.20
Irena	.....	.....	.....	3.60
Ironton	.....	.....	.....	2.55
Jefferson City †	89	45	68.7	3.40
Jerome †	.....	.....	.....	2.47
Kidder	93	39	67.8	2.05
Lamar †	91	42	69.4	0.77
Lamonte †	.....	.....	.....	2.86
Langdon † [1]	93	35	67.2	1.11
Lebanon	91	42	67.6	2.61
Lexington †	93	47	69.5	3.43
Liberty	91	37	68.1	3.22
Linn Creek	89	46	68.2	2.77
Louisiana Bridge †	.....	.....	.....	4.12
Mansfield	.....	.....	.....	2.67
Marble Hill	90[a]	44[a]	68.4[a]	1.10
Marshall †	94	40	69.0	3.38
Mexico †	90	41	67.0	3.85
Mine La Motte	87	44	67.6	2.37
Mound City *† [1]	99	40	69.8	1.63
Mount Vernon	.....	.....	.....	2.12
Neosho	91	42	68.6	2.28
New Boston	89	32	64.9	0.79
New Hartford	.....	.....	.....	4.13
New Haven *[1]	88	44	66.6	3.00
New Palestine	.....	.....	.....	4.51
Oakfield	88	45	67.2	2.82
Oak Ridge *[4]	97[e]	40	65.1	0.30
Olden	91	44	69.2	3.08
Oregon *a*	92	40	69.8	1.51
Oregon *b* † [1]	92	40	69.2	1.42
Oto	.....	.....	.....	0.80
Paris	.....	.....	.....	2.93
Phillipsburg *[1]	88	50	66.8	1.84
Pickering *[1]	94	38	69.7	1.70
Platte River *[2]	90	42	63.6	0.66
Poplar Bluff	.....	.....	.....	0.61
Princeton [1]	91	42	67.8	1.33
Rea *[1]	87	38	66.6	1.08
Rolla †	.....	.....	.....	0.62
Saint Charles *b* [1]	90	43	66.7	2.54
Saint Joseph †	.....	.....	.....	0.75
Saint Louis *a*	90	40	66.9	2.00
Saint Louis *b*	94	44	68.0	1.99
Missouri—Cont'd.	°	°	°	*Ins.*
Sedalia	92	45	70.5	4.01
Shelbina	.....	.....	.....	2.10
Stanberry *[2]	86	48	65.5	3.40
Steelville *[1]	80	40	61.5	3.45
Stellada †	95	41	70.1	4.74
Vancleve	.....	.....	.....	2.55
Vermont *† [1]	90	46	67.0	3.23
Warrensburg *[1]	91	56	69.3	3.84
Warrenton	89[e]	44[e]	68.1[e]	2.42
Wellsville	.....	.....	.....	4.55
West Plains	.....	.....	.....	2.40
Wheatland	.....	.....	.....	4.83
Whiteside	95	43	69.3	2.20
Withers Mills	.....	.....	.....	2.55
Montana.				
Bozeman †	84	32	58.0	0.89
Camp Poplar River	95	30	59.4	0.20
Cokedale	.....	.....	.....	1.08
Fort Custer	96	34	64.8	0.34
Fort Keogh	96	36	62.3	0.33
Fort Logan	85	28	52.4	0.37
Fort Missoula	89	29	51.8	0.33
Glendive †	96	35	64.2	0.95
Great Falls †	95	33	59.8	0.08
Hogan	86	32	59.3	0.05
Horr †	85	32	58.9	1.04
Virginia City †	82	32	58.0	0.82
Nebraska.				
Agee *[2]	99	42	66.7	0.14
Ansley † [1]	96	27	65.3	0.18
Arborville *[1]	95	44	65.3	0.50
Ashland *[1]	93	42	68.1	0.75
Ashton	95	34	.....	0.63
Auburn *a* *† [1]	96	35	70.0	0.66
Bassett *[1]	100	32	66.3	T.
Beatrice †	94	35	66.8	0.28
Bookwalter	.....	.....	.....	0.00
Brandon	.....	.....	.....	0.50
Callaway †	91	31	64.5	0.13
Cornlea *	94	.....	.....	0.11
Creighton † [1]	89	30	62.7	0.28
Crete [1]	96	34	67.8	0.18
Culbertson *a* †	.....	.....	.....	0.28
David City *† [2]	90	40	67.4	2.70
De Soto *[1]	96	36	66.9	1.31
Dunning *[1]	87	31	67.3	0.00
Ericson *† [1]	93	40	66.1	0.10
Ewing *† [1]	98	36	63.5	0.00
Fairbury *	92	.....	.....	0.64
Falls City *† [5]	91	50	73.4	0.78
Fort Robinson	94	32	63.7	0.28
Fort Sidney	94	31	62.6	1.50
Franklin	94	36	67.3	0.14
Geneva	96	.....	.....	0.20
Genoa † [1]	92	38	65.2	0.81
Gering †	.....	.....	.....	0.25
Haigler *[1]	93	39	64.6	0.16
Hartington †	92	31	64.0	0.66
Harvard *[1]	94	38	67.0	0.25
Hastings *† [1]	90	46	68.0	0.37
Hayes Center *† [1]	96	41	66.5	3.77
Hay Springs †	92	35	.....	0.72
Hebron *† [1]	95	34	67.0	0.94
Holdrege [2]	.....	.....	67.1	0.25
Imperial *[1]	92	44	66.2	0.50
Kennedy *† [1]	86	48	63.2	0.72
Kimball †	96	32	64.6	0.61
Lexington †	101	34	66.7	0.79
Lincoln [1]	95	36	68.7	0.17
Marquette *	95	41	.....	0.15
Minden *[1]	92	42	65.5	0.23
Mullen *† [1]	110	32	62.6	0.30
Nebraska City *† [1]	98	37	72.1	0.12
Nesbit	.....	.....	.....	0.10
Norfolk † [1]	89	34	65.0	0.19
North Loup † [1]	90*	29	66.6	0.20
Oakdale † [1]	94	28	63.7	0.10
O'Neill *[1]	92	38	65.4	0.63
Palmer *[1]	94	36	60.7	0.00
Plattsmouth †	.....	.....	.....	0.78
Precept *[1]	93	42	65.2	0.15
Ravenna	94	32	.....	0.88
Schuyler †	97	29	66.6	0.28
Seward * [2]	91	42	69.2	0.00
Springview	93	30	65.4	0.29
Stanton	95	50	.....	0.35
Superior *[1]	95	39	68.2	0.72
Syracuse *[1]	95	44	68.9	0.22
Tekamah	92	37	65.9	0.65
Turlington *[1]	98	45	71.9	0.12
Wallace	.....	.....	.....	0.42
Weeping Water *[1]	95	35	63.5	0.49
West Point †	88	35	64.6	0.32
Whitman	90	40	66.8	.....
Wilcox *a*	.....	.....	.....	0.23
York *[1]	98	48	70.6	0.76
Nevada.				
Austin	84	38	63.1	0.18
Battle Mountain *[1]	92	48	70.3	0.11
Belmont	82	34	61.2	0.03
Beowawe *[1]	89	45	68.8	0.00
Candelaria	86	43	66.1	0.01
Carlin *[1]	95	37	61.9	0.20
Carson City [1]	91	34	62.5	0.26
Cranes Ranch	.....	.....	.....	0.61

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Nevada—Cont'd.	°	°	°	*Ins.*
Downeyville	.....	50	.....	0.01
Elko *[f]	95	45	62.7	0.00
Ely	83	25	54.2	0.00
Eureka	109	20	72.8	0.04
Fenelon *[1]	98	47	65.5	0.00
Golconda *[1]	94	50	67.7	0.40
Halleck *[1]	90	34	58.9	0.05
Hawthorne *[a 1]	88	52	72.7	0.18
Hawthorne *b*	90	45	68.9	0.19
Hot Springs *[1]	93	53	72.0	0.00
Humboldt *[1]	90	52	67.1	0.15
Lewers Ranch	89	36	63.2	0.20
McDermitt	93	27	59.0	0.00
Mill City *[1]	92	44	64.5	.....
Monitors Ranch	85	30	58.2	0.00
Palisade *[1]	88	37	64.5	0.10
Palmetto	87	33	61.2	T.
Pioche *c*	94	39	64.8	T.
Reno *[1]	85	40	63.8	0.10
Reno State Univ'sy [1]	90	35	62.8	0.07
Saint Clair	89	41	63.8	0.00
South Camp †	83	36	61.4	0.04
Stofiel	90	33	54.1	0.07
Sunnyside	96	15	57.2	0.00
Tecoma *[1]	89	48	65.1	0.00
Toano *[1]	89	55	67.9	0.00
Tuscarora †[d]	103	34	65.2	0.10
Tybo	90	35	63.3	T.
Verdi *[1]	90	36	63.5	0.17
Virginia City	.....	41	.....	0.20
Wabuska *[2]	92	54	70.0	0.01
Wells *[1]	88	35	57.5	0.00
Winnemucca *[1]	88	47	67.8	0.00
New Hampshire.				
Antrim	.....	.....	.....	1.50
Belmont	.....	.....	.....	3.14
Berlin Mills	77	28	54.7	2.14
Brookline	.....	.....	.....	1.57
Concord *a*	76	34	58.8	1.98
East Canterbury	75	40	56.8	1.65
Grafton	80	32	58.0	2.81
Groveton *[1]	78[d]	34[d]	54.8[d]	2.85
Hanover *a* [1]	74	32	56.7	1.72
Lakeport	.....	.....	.....	2.81
Littleton [1]	76	30	54.3	2.50
Manchester [1]	78	39	59.9	1.83
Mine Falls	.....	.....	.....	1.13
Nashua	82	34	60.5	1.49
Newton	80	34	58.6	2.06
North Conway	81	31	57.1	3.83
Pennichuck Station	.....	.....	.....	1.38
Plymouth [1]	80	27	54.6	1.10
Sanbornton	75	34	56.7	2.23
Stratford	83	30	59.2	1.96
Walpole	75	34	57.7	2.15
West Milan	80	28	54.5	2.74
Wiers Bridge	.....	.....	.....	2.45
Wolfboro	.....	.....	.....	2.79
New Jersey.				
Allaire	83	35	61.9	.....
Asbury Park	77	46	64.6	1.22
Bayonne	87	41	65.4	1.11
Belleville	.....	.....	.....	1.98
Belvidere	87	40	62.8	2.37
Beverly †[1]	89	36	62.5	1.93
Bivalve	.....	.....	.....	1.64
Boonton	.....	.....	.....	2.72
Bridgeton *a*	87	47	66.2	1.58
Bridgeton *b*	90	44	67.6	1.50
Camden	86	51	66.8	2.17
Cape May †	84	45	65.8	1.60
Deckertown [b]	83	42	61.6	1.62
Dover	85	35	60.4	2.46
Egg Harbor City [1]	84	37	62.1	1.25
Elisabeth †	85	41	64.0	1.52
Franklinville	86	34	62.0	1.34
Freehold	81	43	63.4	1.41
Friesburg	.....	.....	.....	1.82
Gillette	84	36	62.4	2.68
Hammonton	.....	.....	.....	1.45
Hanover	81	34	61.0	1.97
Highland Park †	85	39	63.6	1.75
Hightstown	85	40	63.0	1.89
Imlaystown	85	42	64.8	2.20
Junction	.....	.....	.....	2.71
Locktown	85	40	63.2	2.92
Moorestown [1]	86	40	62.8	1.75
Mount Holly	85	40	64.2	.....
Newark *a*	82	46	64.4	1.94
Newark *b*	86	44	64.6	1.47
New Brunswick *a*	90	40	65.6	1.77
New Brunswick *b*	81	40	63.0	1.76
Newton †	81	36	60.0	1.88
Ocean City [1]	81	43	66.0	1.02
Oceanic	85	49	68.2	1.28
Paterson	87	41	65.4	1.80
Pensauken	.....	.....	.....	1.96
Plainfield	90	39	65.3	2.24
Rancocas *[1]	83	47	61.5	1.68
Readington *[e]	84	48	68.5	.....
River Vale *[1]	87	33	64.5	1.52
Salem	86	42	.....	2.58
Somerville	89	40	66.0	3.78
South Orange † [1]	82	42	61.6	3.24
Tenafly	85	33	62.0	1.52

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
New Jersey—Cont'd.	°	°	°	*Ins.*
Toms River	85	34	.....	1.93
Trenton *[1]	87	50	67.0	1.92
Vineland	86	43	64.7	1.27
West Summit	81	37	60.5	.....
Whiting	87	39	63.7	1.54
Woodbine	86	38	63.5	1.96
New Mexico.				
Albert †	95	50	73.4	0.32
Albuquerque †	88	50	69.9	T.
Bloomfield *c*	96[d]	35[d]	66.2[d]	T.
Chama †	92	28	61.9	0.00
Clayton †	90	56	71.9	0.65
Coolidge †	86	35	60.5	0.02
Deming *[1]	93	60	77.7	0.08
East Las Vegas †	93	32	63.2	0.48
Embudo	99	38	68.8	0.10
Estalina Springs †	84[d]	37[d]	61.4[d]	0.40
Fort Bayard	92	46	68.1	0.13
Fort Wingate	90	41	64.5	0.04
Gallinas Spring †	96	44	70.0	0.07
Halls Peak †	86	29	58.2	0.79
Hillsboro †	91	46	70.1	0.28
Hills Ranch † [1]	93	38	67.7	0.09
La Luz †	86	53	72.0	0.11
Las Cruces †	96	43	70.5	0.05
Lordsburg *[1]	96	62	77.1	0.05
Monero †	89	30	56.8	0.00
Olio †	90	40	65.7	0.00
Socorro †	94	50	72.6	0.07
Springer †	92	35	65.8	0.11
Taos †	93	35	63.8	T.
New York.				
Adams Center	.....	.....	.....	5.37
Addison [1]	85	37	58.2	0.91
Akron	.....	.....	.....	1.63
Alfred Center	83	33	58.5	2.04
Angelica † [1]	81	33	56.1	2.68
Arcade [1]	82	30	57.5	2.59
Arkwright	76	42	60.2[g]	.....
Attica	.....	.....	.....	1.54
Au Sable Forks	.....	.....	.....	1.77
Avon	.....	.....	.....	1.16
Baldwinsville [1]	83	40	60.9	1.18
Bedford	.....	.....	.....	2.14
Bethlehem Center	.....	.....	.....	2.30
Binghamton † [1]	81	34	59.4	1.33
Bisby Lodge	76	36	57.2	3.10
Bolivar	.....	.....	.....	2.35
Brentwood	78	39	61.6	2.35
Brookfield [1]	79	30	59.1	2.09
Canaseraga [1]	82	34	56.7	1.37
Canton † [1]	81	33	58.0	2.68
Chenango Forks	.....	.....	.....	1.60
Cherry Creek	.....	.....	.....	3.80
Constableville † [1]	75	33	55.2	3.06
Cooperstown [1]	77	34	56.6	3.57
Corning	.....	.....	.....	0.92
Cortland	80	38	58.2	1.58
De Kalb Junction	.....	.....	.....	3.23
Demster	.....	.....	.....	2.16
Deposit	.....	.....	.....	2.17
Dunkirk *b*	77	43	61.8	2.74
Easton	.....	.....	.....	2.32
Eden Center	82	36	63.0	2.71
Elmira *† [1]	85	42	62.5	1.18
Factoryville † [1]	89	33	58.8	2.27
Fleming [1]	83	40	61.2	1.42
Fort Niagara	85	47	65.2	2.57
Galway	.....	.....	.....	1.96
Geneva † [1]	87	37	60.9	1.30
Glens Falls	79	36	58.5	2.73
Gloversville [1]	82	33	56.6	3.00
Hess Road Stat'n † [1]	83	39	60.5	3.69
Honeymead Brook [1]	76	38	58.8	2.36
Humphrey † [1]	82	36	59.3	2.55
Ithaca [1]	84	38	61.1	1.88
Jamestown *† [1]	79	40	61.2	.....
Kings Station	.....	.....	.....	2.39
Lebanon Springs	79	33	57.4	2.79
Le Roy	82	39	60.8	1.17
Little Valley	.....	.....	.....	2.72
Lowville [2]	.....	.....	54.0	3.54
Lyndonville	.....	.....	.....	2.21
Lyons [1]	83	41	61.2	0.81
Lyon Mountain	76	38	55.8	.....
McLean	.....	.....	.....	1.78
Madison Barracks	85	36	61.5	4.80
Malone [1]	80	34	57.7	2.49
Marshland †	80	32	53.1	0.83
Middletown	78	45	61.9	1.41
Minnewaska [1]	75	40	57.7	2.46
Mount Morris	84	33	59.4	1.18
Newark Valley	.....	.....	.....	1.64
New Lisbon *[1]	81	33	55.3	2.76
N'th Hammond † [1]	88	35	60.2	3.25
Number Four † [1]	88	30	54.2	4.00
Ogdensburg *[1]	85	42	59.9	2.39
Oxford	75	38	56.7	2.50
Palermo † [1]	82	34	58.8	2.74
Perry City [1]	83	35	57.4	0.84
Plattsburg B'ks	78	35	58.3	1.68
Potsdam	82	33	58.5	3.11
Poughkeepsie	81	34	60.2	1.37
Quaker Street	79	37	57.2	2.40
Rome	84	30	59.9	3.34

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
New York—Cont'd.	°	°	°	*Ins.*
Romulus	86	38	59.5	1.12
Rondout †	80	44	62.0[f]	2.06
Schodack Depot	.....	.....	.....	2.46
Setauket † [1]	80	45	62.8	3.67
South Canisteo [1]	84	33	56.8	1.40
South Kortright †	81	29	56.1	2.98
Utica	80	36	58.8	3.72
Wappingers Falls	.....	.....	.....	2.06
Watertown	80	37	59.3	4.13
Watkins	88	35	62.4	0.57
West Chazy	.....	.....	.....	2.13
West Point	.....	.....	.....	3.53
White Plains *[1]	78	46	61.0[g]	.....
Willets Point	82	45	64.6	0.92
North Carolina.				
Asheville †	.....	.....	.....	3.05
Bakersville †	84	33	61.9	2.61
Bryson City †	.....	.....	.....	1.28
Chapel Hill †	93	44	71.2	1.97
Columbus	78	42	62.0	15.74
Douglas	87	40	65.2	3.20
Fayetteville †	.....	.....	.....	2.44
Goldsboro †	89	51	71.6	3.76
Greensboro †	84	50	68.2	2.28
Horse Cove *† [1]	78	44	63.1	7.87
Lenoir *[1]	80	44	65.4	5.90
Lillington †	.....	.....	.....	1.95
Littleton †	87	43	67.0	3.32
Louisburg † [1]	83	46	68.6	1.44
Lumberton †	87	41	71.1	2.75
Morganton *† [1]	83	44	66.3	7.52
Mount Airy †	84	38	64.0	4.20
Mount Holly †	.....	.....	.....	2.35
Mount Pleasant [1]	86	44	67.6	2.76
Murphy †	.....	.....	.....	1.49
Newbern †	86	46	72.0	8.35
Oak Ridge †	85	44	66.5	3.71
Pittsboro	87	44	69.0	0.40
Rockingham †	90	46	72.6	1.21
Salisbury	84	52	70.4	2.81
Saxon †	86	38	64.5	3.63
Smithfield	86	45	69.2	3.66
Soapstone M't †	87	40	67.9	3.71
Southern Pines †	93	44	68.4	1.78
Tarboro	88	44	71.2	3.27
Wadeville *† [1]	90	44	70.2	3.29
Washington †	89	42	69.1	5.75
Weldon †	87	44	69.8	2.72
Willeyton	85	44	68.4	2.00
North Dakota.				
Ashley †	89	27	59.2	0.81
Churchs Ferry †	89	30	57.2	1.15
Dickinson † [e]	95	39	63.6	0.10
Fargo † [e]	84*	31	59.7	1.39
Forman †	94	31	62.6	0.44
Fort Stevenson †	89	33	59.0	2.21
Fort Yates	92	31	61.1	0.76
Gallatin *† [1]	88	34	54.2	0.60
Grafton †	89	28	57.4	0.38
Grand Forks †	85	34	59.2	.....
Grand Rapids † [1]	89	31	58.0	1.29
Hope †	90	29	57.4	0.45
Lakota †	86	31	58.1	0.55
Milton †	88	32	60.0	0.79
Minto †	88	32	58.4	0.65
Napoleon † [1]	90	31	58.0	1.79
Power † [1]	88	34	61.5	0.60
Reynolds	89	31	59.0	0.22
Saint Johns †	87	33	56.8	1.13
Seymour †	.....	.....	.....	0.16
Valley City †	88	32	60.0	1.34
Wahpeton †	93	30	61.3	0.70
White Earth †	91	24	57.4	0.55
Wild Rice † [2]	.....	.....	56.8	0.28
Willow City †	93	28	57.6	1.95
Woodbridge †	101	24	59.5	1.08
Yule †	92	28	59.9	0.74
Ohio.				
Akron [1]	85	43	63.2	2.03
Annapolis	.....	.....	.....	1.32
Ashland	84	50	65.0	1.11
Athens [1]	87	41	64.6	2.28
Auburn	.....	.....	.....	2.25
Bangorville [1]	85	39	63.2	1.59
Bement [1]	90	39	62.7	2.56
Benton Ridge	.....	.....	.....	2.27
Bethany	.....	.....	.....	2.38
Bissells	.....	.....	.....	2.39
Bloomingburg	86	43	67.0	1.56
Caledonia †	.....	.....	.....	1.97
Cambridge	.....	.....	.....	1.68
Camp Dennison	.....	.....	.....	2.55
Canton † [1]	86	40	62.9[g]	2.30
Cardington	.....	.....	.....	1.91
Carrollton	86	35	62.4	2.07
Celina [1]	85	43	60.5	1.91
Chicago	.....	.....	.....	2.50
Circleville †	.....	.....	.....	0.70
Clarksville [1]	87	39	65.8	2.33
Cleveland [1]	86	45	62.6	2.95
Colebrook	.....	.....	.....	2.05
Dayton [1]	87	42	65.7	3.28
Demos [1]	84	43	65.2	1.73
Ellsworth	.....	.....	.....	2.15
Elyria	90	43	64.8	3.11

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Ohio—Cont'd.	°	°	°	*Ins.*
Findlay [1]	87	36	64.1	2.76
Fostoria [1]	88	44	65.4	3.36
Frankfort	88	42	69.0	2.63
Garrettsville [1]	83	36	59.3	2.96
Georgetown [1]	90	45	66.3	2.02
Gratiot	84	41	64.7	2.13
Greenfield	82	34	63.0	1.00
Green Hill	.....	.....	.....	1.42
Greenville [1]	82	39	63.5	1.89
Hackney	.....	.....	.....	1.90
Hanging Rock [1]	89	37	64.0	1.84
Harbor [1]	84	44	63.7	4.56
Hedges	.....	.....	.....	4.03
Hillhouse	.....	.....	.....	5.56
Hiram [1]	85	42	62.0	2.61
Jacksonboro *	91	44	.....	2.65
Kenton †	92	37	64.6	2.80
Leipsic	95	42	70.0[e]	2.46
Levering	.....	.....	.....	1.69
Logan [1]	96	40	63.4	2.27
Lordstown [1]	84	34	61.0	1.74
Lowell	.....	.....	.....	2.61
McConnelsville [1]	88	39	65.3	1.85
Mansfield †	.....	.....	.....	1.89
Marietta *a* †	.....	.....	.....	3.13
Marietta *b* [1]	85	43	65.2	3.05
Marion [1]	91	35	63.2	2.52
Millport	.....	.....	.....	2.36
Montpelier [1]	86	39	62.1	5.79
New Alexandria [1]	83	43	65.7	1.80
New Berlin	.....	.....	.....	2.44
New Comerstown [1]	86	36	62.0	2.15
New Holland	86	40	64.0	1.81
North Lewisburg [1]	91	40	67.7	2.90
North Royalton	.....	.....	.....	1.54
Oberlin [1]	89	41	63.1	3.07
O. S. University [1]	86	34	63.4	1.27
Orangeville	85	35	61.6	2.90
Pataskala	.....	.....	.....	1.70
Portsmouth *a* †	.....	.....	.....	3.82
Portsmouth *b* [1]	89	44	64.4	3.84
Rittman	.....	.....	.....	2.14
Sharon Center	.....	.....	.....	1.55
Shenandoah	.....	.....	.....	1.81
Shepherdstown	.....	.....	.....	1.15
Sidney †	.....	.....	.....	1.85
Springboro	.....	.....	.....	4.06
Tiffin † [1]	87	42	64.3	2.56
Tyrone	.....	.....	.....	1.39
Upper Sandusky [1]	85	41	64.5	2.55
Van Wert	88	34	63.1	3.68
Walnut	.....	.....	.....	0.97
Wauseon [1]	88	39	62.6	4.61
Waverly [1]	90	38	65.7	2.56
Waynesville	.....	.....	.....	3.18
Westerville [1]	82	37	62.8	1.23
West Milton *	90	50	.....	3.78
Weymouth	89	35	62.5	1.57
Wheeler † [2]	.....	.....	63.6	4.54
Wooster *a* [1]	88	36	60.9	3.20
Wooster *b* † [1]	87	36	63.6	2.09
Youngstown [1]	94	43	65.3	2.09
Zanesville †	.....	.....	.....	2.49
Oklahoma Ter.				
Anadarko †	98	47	73.6	1.76
Buffalo †	102	44	73.0	0.82
Burnett † [1]	92	45	70.6	0.65
Fort Reno †	.....	50	.....	1.93
Fort Sill	95	47	71.3	3.57
Gate City † [1]	100	42	69.6	0.86
Guthrie † [1]	101	48	74.0	0.91
Keokuk Falls †	91	47	72.0	3.76
Kingfisher †	90	62	74.5	1.20
Mangum †	98	49	72.6	3.44
Ponca † [b]	96	40	72.7	0.24
Sac & Fox Agency †	94	45	72.2	2.17
Oregon.				
Albany *a* † [1]	90	38	59.6	1.94
Albany *b* *[1]	88	46	64.5	1.65
Ashland *a* *[1]	87	48	63.2	0.34
Aurora *[1]	94	42	62.5	1.76
Bandon *[4]	72	39	54.4	1.30
Brownsville *[1]	90	43	64.5	1.86
Comstock *[1]	92	38	59.3	2.37
Corvallis *b* *[1]	88	45	62.9	1.55
East Portland *	87	40	.....	1.89
Eola	87	36	59.6	1.81
Junction City *[1]	88	44	61.2	0.16
Lafayette *[1]	94	38	59.9	1.66
Leland *[1]	98	40	62.3	0.29
McMinnville *b* *[1]	94	39	61.0	2.25
Monmouth *[1]	94	38	58.3	0.18
Portland *[1]	86	42	61.2	1.43
Riddles *[1]	98	40	62.2	1.06
Roseburg *[1]	92	44	63.9	0.94
Salem *a* *[1]	75	30	52.1	1.67
Sheridan *[1]	92	41	62.6	1.45
Silverton *[1]	86	40	60.4	1.25
Siskiyou *[1]	95	40	62.0	0.80
Springfield *[1]	88	43	61.5	1.61
Pennsylvania.				
Altoona	85	46	65.5	1.94
Aqueduct *[1]	86	47	63.3	5.40
Blooming Grove *[1]	82	32	59.2	3.60
Blue Knob [1]	81	36	60.6	3.63

Meteorological record of voluntary observers, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Pennsylvania—Con.	°	°	°	*Ins.*
Brookville †	.....	.....	.....	2.48
Browers Lock	.....	.....	.....	2.22
Carlisle [1]	86	42	64.0	4.85
Clarion †	.....	.....	.....	3.59
Coatesville [1]	87	39	62.5	3.15
Confluence †	.....	.....	.....	1.57
Coopersburg [1]	.....	.....	62.4	3.56
Corry [1]	85	34	57.8	4.18
Davis Island Dam †	.....	.....	.....	1.90
Doylestown	.....	.....	.....	2.41
Drifton [d]	77	40	58.7	2.29
Du Bois †	.....	.....	.....	1.59
Dyberry † [1]	80	31	55.9	2.10
East Mauch Chunk	83	39	62.3	2.62
Easton [1]	81	41	62.2	2.73
Edinburg * [1]	80	40	60.6	.....
Emporium [1]	85	38	61.5	2.78
F'ks of Neshami'y [1]	.....	.....	61.9	3.13
Frederick	.....	.....	.....	1.30
Freeport †	.....	.....	.....	3.15
Girardville [1]	79	43	61.2	3.42
Grampian [1]	82	38	60.5	2.12
Greensboro †	.....	.....	.....	2.01
Hamburg	86	40	63.2	2.39
Hollidaysburg [1]	86	35	61.7	2.89
Honesdale [1]	78	35	58.3	2.15
Huntingdon †	86	37	62.1	2.81
Johnstown †	89	41	64.4	1.60
Kane	79	35	57.9	2.86
Kennett Square [2]	.....	.....	61.9	3.17
Kilmer [1]	81	48	63.8	3.45
Lancaster	87	43	63.4	3.74
Lansdale	.....	.....	.....	2.23
Lebanon [1]	85	41	63.1	3.63
Le Roy †	81	40	61.2	2.04
Lewisburg	85	34	59.9	4.18
Ligonier [1]	88	37	63.1	2.14
Lock Haven † [1]	85	39	62.0	1.34
Lock No. 4 †	.....	.....	.....	1.83
McConnellsburg [1]	90	38	63.9	2.81
Mahoning †	.....	.....	.....	3.53
Newcastle † [1]	87	34	64.8	2.53
Oil City †	.....	.....	.....	2.74
Ottsville	.....	.....	.....	2.67
Parkers Landing †	.....	.....	.....	3.87
Philadelphia *a*	.....	.....	.....	2.21
Philadelphia *b*	88	49	67.1	2.47
Philadelphia *c*	86	48	66.3	2.28
Phœnixville	86	41	64.4	2.14
Point Pleasant	.....	.....	.....	2.80
Pottstown	86	44	64.4	2.33
Pottsville [1]	92	32	62.3	6.27
Quakertown [1]	84	38	61.4	2.97
Reading † [2]	.....	.....	63.0	2.54
Ridgway †	.....	.....	.....	2.44
Saegerstown	86	34	59.7	3.44
Salem Corners [1]	81	34	57.6	2.24
Saltsburg †	.....	.....	.....	1.13
Seisholtzville	.....	.....	.....	2.38
Selins Grove [1]	88	29	63.2	3.29
Smiths Corners	.....	.....	.....	3.19
Somerset [1]	87	34	61.8	1.42
South Eaton	80	37	60.9	2.97
State College [1]	81	41	61.6	2.24
Stoyestown †	.....	.....	.....	1.88
Swarthmore	84	42	65.4	1.79
Uniontown [1]	84	39	64.9	2.21
Warren †	.....	.....	.....	2.52
Wellsboro * † [1]	85	34	54.8	1.18
West Chester	84	47	64.7	2.03
West Newton †	.....	.....	.....	2.25
Westtown	82[e]	40[f]	63.0[f]	2.38[d]
Wilkesbarre †	85	38	61.7	2.51
Wysox [1]	86	33	59.3	1.48
York	88	41	64.0	2.66
Rhode Island.				
Bristol [1]	75	45	62.8	2.78
Kingston *a*	78	42	60.8	2.58
Kingston *b* [1]	75	41	60.5	2.48
Lonsdale	.....	.....	.....	1.83
Olneyville	82	48	64.6	.....
Pawtucket	81	39	62.0	1.80
Providence *a*	80	46	63.3	1.81
Providence *b*	81	37	61.5	1.82
Providence *c*	80	44	61.0	1.92
South Carolina.				
Allendale †	91	51	73.5	8.94
Anderson †	.....	.....	.....	4.97
Batesburg †	92	49	71.4	6.93
Blackville †	93	49	72.8	4.11
Camden †	.....	.....	.....	4.02
Cheraw *a* †	88	40	70.9	4.89
Cheraw *b* †	.....	.....	.....	5.17
Effingham †	.....	.....	.....	3.30
Florence †	88	50	73.2	3.46
Green Pond †	93	54	73.2	12.84
Greenville †	83	43	67.2	4.76
Greenwood †	86	52	69.0	5.54
Hardeeville †	90	58	74.4	8.88
Kingstree †	90	49	73.3	4.13
Kitchings Mills †	85	52	73.8	5.86
Longshore † [1]	86	50	71.6	6.12
Mount Carmel †	.....	.....	.....	4.74
Nichols †	.....	.....	.....	4.81
Port Royal * † [1]	92	63	74.4	14.95
Saint Georges †	92	53	72.8	7.62
Saint Matthews †	91	52	72.1	4.51
Saint Stephens †	.....	.....	.....	6.06
Simpsonville † [1]	83	54	69.4	5.11
Society Hill †	86	48	70.2	3.57
Spartanburg †	86	50	72.4	4.00
Statesburg † [1]	85	52	71.1	2.88
Tillers Ferry †	.....	.....	.....	2.31
Trial	90	51	73.0	5.24
Wateree †	.....	.....	.....	4.80
Yorkville	89	45	71.8	2.71
South Dakota.				
Aberdeen †	95	31	63.4	0.83
Alexandria †	102	29	62.2	0.15
Ashcroft †	101	34	63.2	0.16
Bowdle * † [1]	92	37	60.4	1.32
Britton † [1]	93[e]	30[e]	58.0[i]	0.91
Brookings † [1]	97	30	60.7	1.49
Carthage	.....	.....	.....	0.10
Castlewood † [1]	96	29	61.7	0.21
Cross †	88	29	58.8	0.18
De Smet † [e]	98	31	60.9	0.67
Elkton * [1]	94	30	57.7	1.62
Flandreau †	98	31	62.2	0.73
Forestburg †	99	29	64.4	0.39
Forest City †	96	50	70.6	0.87
Fort Meade	92	30	60.8	0.32
Fort Randall	99	31	66.4	0.18
Fort Sully	101	41	67.8	0.53
Frankfort †	97	30	62.7	0.38
Gary †	95	33	61.1	0.00
Highmore † [1]	95[e]	34	64.8	1.10
Hitchcock	.....	.....	.....	0.96
Hotch City †	97	28	64.4	0.19
Kimball †	96	36	65.3	0.72
Mellette * [1]	90	36	63.2	0.60
Millbank † [1]	100	35	62.6	0.13
Mitchell † [1]	96	32	62.8	0.12
Oelrichs †	94	32	62.0	0.60
Onida † [1]	96	35	61.5	0.76
Parker †	92	30	63.6	0.17
Parkston † [h]	95	21	62.1	T.
Piedmont	.....	.....	.....	T.
Plankinton † [1]	96	33	63.9	0.16
Rosebud †	92	31	62.0	0.19
Sioux Falls †	90	29	62.0	T.
Spearfish † [1]	92	43	63.8	0.23
Tyndall †	91	40	67.4	T.
Webster † [1]	99	29	64.4	0.95
Wentworth † [1]	96	29	59.2	0.17
Wessington †	.....	.....	.....	0.40
Wessington Sp'gs †	100	38	65.8	0.19
Whitewood	.....	.....	.....	0.49
Wolsey * † [1]	95	32	62.1	0.26
Tennessee.				
Andersonville * [1]	86	45	68.2	2.31
Arlington †	92	40	69.6	1.48
Ashwood * † [1]	85	47	67.8	3.71
Austin * † [1]	86	42	68.1	3.68
Bethel Springs * [1]	83	54	69.7	3.26
Bolivar †	84	50	68.1	2.50
Brownsville †	90	48	72.1	1.69
Carthage †	.....	.....	.....	1.82
Charleston †	87	45	69.0	5.51
Clarksville [1]	.....	.....	.....	4.23
Clinton †	.....	.....	.....	1.49
Columbia †	.....	.....	.....	2.85
Covington *b* †	94	44	70.8	0.62
Dunlap	.....	.....	.....	3.14
Dyersburg †	89	46	70.0	0.94
Fayetteville * [1]	85	50	68.3	3.09
Florence Station * [1]	85	49	65.4	2.27
Franklin * † [1]	87	49	68.0	3.20
Greeneville * [1]	81	42	64.3	1.78
Harriman †	90	42	67.7	3.40
Hohenwald * [1]	90	44	68.8	3.43
Jacksboro * [1]	82	42	62.0	3.06
Jackson * [1]	87	48	68.4	1.80
Johnson City † [1]	87	38	66.1	1.03
Johnsonville †	.....	.....	.....	3.95
Kingston †	.....	.....	.....	1.51
Lookout Mt †	78	50	65.5	5.08
Loudon †	.....	.....	.....	1.15
Lynnville * [1]	87	49	68.5	3.81
Milan †	90	40	70.2	3.71
Missionary Ridge * [2]	.....	54	67.4	.....
Newport * [1]	89	39	65.1	1.16
Nunnelly * [1]	87	50	68.4	5.10
Parksville * [1]	86	46	68.1	0.82
Riddleton †	90	41	68.8	2.02
Rockwood †	.....	.....	.....	2.15
Rogersville * † [1]	86	50	66.1	1.14
Rugby * [1]	82	45	64.0	1.84
Savannah * [1]	91	45	65.1	1.22
Sharp * [1]	86	50	67.3	2.94
Springdale * [1]	88	43	68.0	0.60
Strawberry Plains †	.....	.....	.....	0.05
Waynesboro * [1]	84	45	64.5	4.77
Texas.				
Albany * † [1]	94	52	75.4	1.61
Arthur City †	.....	.....	.....	2.39
Aurora * [1]	101	52	78.1	0.50
Austin *a* †	94	56	79.3	.....
Austin *b* * [5]	95	60	78.4	.....
Belton †	94	48	72.6	0.48
Boerne * [3]	.....	58	72.8	0.17
Brady †	90	50	73.0	1.24
Brazoria † [1]	91	57	74.4	2.81
Brenham †	96	55	77.6	1.21
Brownwood †	92	54	75.6	1.50
Camp Eagle Pass	98	53	78.0	1.67
Camp P. Colorado	95	42	68.5	1.40
Childress † [1]	98	50	75.2	1.65
Coldwater †	.....	.....	.....	0.07
College Station	101	56	79.5	2.32
Colorado *b*	.....	.....	.....	0.28
Columbia †	91	55	76.2	0.86
Corsicana *b* †	92	54	73.2	0.38
Cuero *b* †	98	43	78.2	2.04
Dallas *a* †	93	52	76.0	0.20
Dallas *b* * † [1]	98	52	82.8	0.88
Devine	94	52	76.0	1.09
Durham †	.....	.....	.....	1.30
Duval * [1]	98	59	80.1	0.70
Epworth † [1]	93	48	71.6	0.74
Fay	.....	.....	.....	0.00
Floydada †	88[a]	49[b]	69.2[a]	0.75
Forestburg †	98	54	77.0	1.70
Fort Brown †	95	64[k]	82.2[k]	0.46
Fort Clark	93	53	77.1	0.41
Fort Hancock	99	36	70.6	0.00
Fort McIntosh	93	56	76.7	2.10
Fort Ringgold	99	55	80.2	2.75
Fredericksburg † [1]	93	53	77.6	0.57
Gainesville †	94[e]	50[e]	74.2[d]	1.95
Grape Vine † [1]	100	48	79.6	1.01
Hallettsville * † [1]	97	51	78.8	2.28
Hartley †	95	40	72.2	0.00
Haskell †	94	65	78.2	2.29
Hearne †	96	56	78.6	0.60
Highland	101	52	76.0	1.00
Houston †	92	55	75.4	2.61
Huntsville †	93	54	75.8	0.33
Kent	.....	.....	.....	1.44
Longview †	94	52	74.5	1.97
Luling †	96	54	76.8	3.72
McGregor † [3]	.....	44	70.8	2.00
Marshall †	90	62	78.2	1.03
Menardville * † [1]	91	50	71.5	1.33
Mountain Spring †	97	52	74.6	1.02
Nacogdoches †	94	52	74.6	1.18
New Braunfels †	94	54	76.3	1.29
New Ulm [1]	99	60	78.3	0.24
Orange †	96	66	81.2	1.71
Panter †	.....	.....	.....	1.05
Paris †	93	54	74.0	1.99
Quanah †	98	53	75.1	4.10
Red River City †	.....	.....	.....	1.75
Rio Grande City †	.....	.....	.....	1.95
Roby †	101	47	74.2	3.71
Round Rock †	99	54	79.0	0.08
San Antonio *b*	96	55	78.1	0.93
Sierra Blanca *a* †	95	45	71.0	0.00
Sierra Blanca *b*	.....	.....	.....	0.00
Silver Falls † [1]	99	47	74.5	1.73
Temple †	93	52	75.3	0.00
Tyler †	97[e]	54[e]	74.6[e]	5.99
Venus †	98	51	76.8	0.58
Victoria * † [1] [k]	94	62	81.7	T.
Waco †	95	52	77.7	T.
Weatherford †	90	50	75.5	0.63
Utah.				
Blue Creek * [1]	89	56	64.4	.....
Cisco †	94	38	68.3	T.
Corinne * [1]	92	53	69.2	0.20
Deseret † [1]	90	35	64.4	0.06
Fillmore †	104	41	71.8	0.06
Fort Du Chesne	91	34	63.8	T.
Grouse Creek †	80	.....	.....	0.10
Kelton * [1]	94	42	66.5	0.60
Lake Park	89	42	66.2	0.04
Levan † [2]	.....	.....	63.6	T.
Loa †	88	28	58.4	0.00
Losee † [1]	89	31	61.9	T.
Manti †	95	38	63.2	0.15
Moab † [1]	91	40	64.2	T.
Mount Carmel * † [1]	89	34	63.8	T.
Ogden *b* † [2]	.....	.....	69.9	0.54
Promontory * [1]	92	50	67.7	1.80
Provo City † [2]	.....	.....	61.8	0.15
Richfield † [1]	89	34	62.2	0.00
Saint George † [1]	101	53	77.4	0.00
Scofield † [1]	87	20	53.8	0.11
Snowville †	89	35	62.2	0.49
Stockton † [2]	.....	.....	61.9	.....
Vermont.				
Brattleboro *a*	77	30	59.6	1.91
Burlington †	79	40	62.0	3.22
Chelsea * [1]	73	40	53.0	1.75
Cornwall	.....	.....	.....	1.42
Enosburg Falls †	82	30	57.8	1.43
Hartland †	76	30	55.2	2.18
Simonsville	79	29	54.9	.....
Strafford * [1]	74	38	57.7	1.55
Vernon * [6]	76	36	60.2	3.04
Wells	75	32	56.1	2.07
Woodstock	78	31	56.7	1.44
Virginia.				
Abingdon †	.....	.....	.....	3.10
Ashland [1]	89	43	67.1	3.09
Avon †	89	42	65.6	4.96
Bedford City †	83[e]	46[d]	66.6[d]	4.00
Big Stone Gap † [1]	84	37	60.6	1.59
Birdsnest * † [1]	87	55	70.3	1.75
Charlottesville	89[d]	45[d]	66.4[d]	3.16
Christiansburg †	.....	.....	.....	2.02
Clarksville †	.....	.....	.....	4.15
Clifton Forge	83[h]	42	63.5[h]	.....
Dale Enterprise † [1]	86	39	60.9	2.97
Danville †	.....	.....	.....	2.01
Hot Springs	80[e]	36[e]	60.9[e]	2.82
Lexington †	84	37	63.4	2.97
Marion †	85	38	62.8	2.75
Mossing Ford † [2]	.....	.....	67.2	1.96
Nottaway	90	42	68.9	4.91
Petersburg †	90	46	69.4	3.46
Richmond †	90	44	69.7	3.09
Salem †	86	48	66.8	4.75
Spottsville † [1]	85	44	67.0	3.51
Stanardsville †	86	48	66.1	4.40
Staunton † [1]	87	41	63.1	3.23
Stephens City	.....	.....	.....	2.52
Woodstock †	.....	.....	.....	1.76
Wytheville †	.....	.....	.....	3.57
Washington.	79	39	60.9	
Aberdeen † [1]	81	40	56.4	4.85
Anacortes	.....	.....	.....	1.88
Centerville †	95	35	64.7	0.09
Chehalis †	87	39	59.7	3.01
Chelan †	86	42	63.4	0.26
Colfax †	87	31	58.2	0.40
Ellensburg †	86	30	57.4	0.13
Fort Simcoe	88	37	65.8	0.38
Fort Spokane	88	35	59.1	0.40
Fort Townsend	80	38	57.1	0.66
Madrone †	80	42	59.0	3.23
Moxee Valley †	90	30	62.1	0.03
Olga †	72	43	56.8	2.52
Pine Hill * [1]	89	39	61.3	0.36
Pomeroy †	95	42	67.6	0.22
Rosalia † [1]	85	32	58.2	0.82
Seattle †	86	45	62.0	2.28
Tacoma †	84	44	60.8	2.85
Vashon	89	40	61.2	0.37
Waterville †	87	32	58.8	0.99
West Virginia.				
Bluefield [1]	81	36	62.2	2.37
Buckhannon *a* †	.....	.....	.....	3.42
Central Station * † [5]	86	40	68.8	2.91
Charleston *a* †	.....	.....	.....	1.88
Davis	82	35	58.6	2.61
Elkhorn †	82	39	63.0	2.50
Ella † [1]	83	44	64.4	2.60
Fairmont †	.....	.....	.....	2.31
Glenville †	83	43	64.0	4.49
Grafton †	84	38	64.4	3.39
Harpers Ferry †	.....	.....	.....	3.31
Harrisville †	86	38	63.9	2.69
Hinton †	.....	.....	.....	1.32
Huntington †	85	43	64.0	3.44
Kingwood * † [1]	87	42	62.7	1.70
Martinsburg †	85	52	67.9	1.43
Morgantown *a* †	.....	.....	.....	2.94
Morgantown *b* * † [1]	88	32	65.4	1.42
New Martinsv'le * † [1]	90	46	64.5	2.60
Nuttallburg	89	42	67.5	2.79
Parkersburg † [1]	88	42	65.0	2.79
Philippi †	.....	.....	.....	3.05
Pleasant Hill * [3]	84	36	57.2	2.26
Point Pleasant † [1]	87	43	65.4	2.02
Romney * † [1]	77[l]	49[l]	64.3[l]	0.82[g]
Rowlesburg †	.....	.....	.....	2.13
Spencer †	92	41	65.3	2.05
Weston †	.....	.....	.....	3.10
Wheeling *a* †	.....	.....	.....	2.52
Wheeling *b* †	87	45	67.4	3.17
White Sul. Springs †	.....	.....	.....	1.60
Wisconsin.				
Amherst	86	32	59.8	1.74
Baraboo †	81[d]	38[d]	60.0[d]	4.26
Barron †	83	29	56.8	1.77
Bayfield	82	40	58.6	0.45
Beaver Dam	84	44	65.0	0.74
Black River Falls †	87	32	60.0	2.51
Cadiz [2]	.....	.....	59.0	1.27
Centralia	85	32	60.2	1.65
Chippewa Falls †	.....	.....	.....	3.05
Columbus	83	35	60.7	3.55
Crandon †	83	31	56.6	4.09
Delavan (near) [2]	.....	.....	56.8	1.97
Depere	82	41	60.8	3.73
Eau Claire *a*	84	38	61.0	2.90[j]
Embarrass * † [1]	80	42	60.0	3.00
Florence †	84	.....	.....	1.35
Fond du Lac [1]	83	35	59.8	2.46
Harvey †	84	38	60.8	3.07
Hillsboro	84	31	58.7	3.05
Hudson	91	38	63.6	2.80
Janesville	86	36	61.6	2.00
Juneau †	84	35	60.2	3.45
Koepenick * † [1]	84	34	59.3	2.70
Lincoln [2]	.....	.....	60.6	1.19
Madison	81	45	61.5	3.29
Manitowoc † [1]	85	41	61.1	1.74

Meteorological record of voluntary observers—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Wisconsin—Cont'd.	°	°	°	*Ins.*
Meadow Valley †	85	35	59.6	1.99
Medford *a* †	.....	.....	.....	3.05
Medford *b* †	85	31	58.4	2.91
Menomonie	88	34	61.5	2.90
Neillsville †	84	31	58.2	2.33
Oconomowoc †	84	38	62.1	2.98
Oconto	85	38	59.8	1.73
Osceola † [1]	88	31	61.6	1.34
Oshkosh †	82	42[d]	61.7[d]	1.61
Pepin	.....	36	.....	3.37
Portage †	.....	.....	.....	3.90
Port Washington	88	42	63.4	1.93
Prairie du Chien	94	38	64.2	1.96
Raymond	84	40	61.0	2.40
Richland Center †	87	36	59.6	3.25
Sharon[1] [f]	86	44	61.0	1.53
Shawano	83	34	57.4	1.16
Shell Lake	85	36	60.0	0.96
Sparta *b* † [1]	85	34	60.8	2.34
Valley Junction †	85	32	59.1	2.23
Viroqua	82	40	59.8	2.70
Watertown	83	36	59.2	3.85
Waukesha †	.....	.....	.....	2.45
Wisconsin—Cont'd.	°	°	°	*Ins.*
Westfield †	82	38	59.9	2.71
Weston *† [3]	86	34	56.4	3.60
Whitehall †	95	34	63.6	1.30
Wyoming.				
Camp Pilot Butte	89	26	57.2	0.50
Evanston †	82	30	58.6	T.
Fort McKinney	90	35	63.2	0.16
Fort Washakie	85	30	59.4	0.00
Fort Yellowstone	82	29	54.9	1.60
Lander	84	35	62.6	T.
Lusk †	90	29	60.8	0.03
Saratoga †	84	19	56.4	0.00
Sundance	89	32	60.2	0.46
Wheatland †	93	32	64.6	0.00
Canada.				
Fort Francis, Ont.	85	25	51.8	2.16
Mexico.				
La Logia	98	68	81.4	3.01
Leon de Aldamas	82	44	65.7	3.04
Puebla [1]	80	47	63.5	5.10
Topolobampo *‡ [3]	98	76	81.3	1.50
West Indies.				
Hamilton, Ber [1]	85	72	77.7	3.20

Reports received too late to be used in general discussion of weather for September, 1892.

California.				
Alcalde *† [1]	105	58	82.4	0.00
Bishop Creek *† [1]	98	58	76.5	0.00
Calistoga *† [1]	96	44	66.7	0.00
Fernando *† [1]	98	50	70.2	0.00
Goshen *† [1]	99	58	75.5	0.00
Hornbrook *† [1]	96	44	65.6	0.45
Indio *† [1]	103	68	87.2	0.00
Lemoore *† [1]	102	56	73.6	0.00
Newhall *† [1]	102	50	71.3	0.00
Oakland *b* *† [1]	77	56	62.5	0.00
Palm Springs *† [1]	114	67	90.7	0.00
Pasadena [3]	96*	47	64.6	T.
Portersville *† [1]	102	56	77.2	0.00
San Mateo *† [1]	80	53	62.4	0.03
San Miguel *† [1]	101	55	71.0	0.00
Soledad *† [1]	90	48	63.7	0.05
South Vallejo *† [1]	83	48	62.2	0.00
Summit *† [1]	83	35	56.7	0.00
Vacaville *b* *† [1]	107	53	73.9	0.00
Winters *† [1]	98	55	77.9	0.00
Colorado.				
Las Animas †	93	38	67.6	0.04
Indiana.				
Marion †	86	37	63.9	3.53
Kansas.				
Medicine Lodge	.....	.....	.....	0.84
Phillipsburg †	92	46	70.0	0.00
Nebraska.				
Albion	95[d]	33[d]	61.0*	0.20
Fremont *† [1]	93	40	66.7	0.62
Orleans *† [1]	95	40	67.0	0.00
Nevada.				
Browns *† [1]	96	54	72.2	0.00
Wadsworth *† [1]	96	34	65.8	0.00
New Mexico.				
White Oaks †	91	38	68.0	0.64
New York.				
Lockport	85	41	62.4	3.86
Port Jervis	78	38	60.0	3.34
Wedgwood [1]	90	36	58.8	0.75
Oregon.				
Arlington †	91	42	66.4	0.12
Ashland *b*	94	38	62.0	0.31
Aurora (near)	88	39	59.6	1.52
Bake Oven	88	42	65.0	0.32
Beulah †	92	26	57.8	0.22
Burns †	102	38	65.9	0.90
Corvallis *a*	87	39	61.6	1.78
Corvallis *c*	90	34	59.4	1.68
Crook	90	29	57.4	0.72
Eugene	.....	.....	.....	1.25
Forest Grove	92	36	60.8	2.62
Glenora	89	35	57.9	10.27
Grants Pass *b* † [1]	97	52	67.1	0.00
Happy Valley †	92	35	62.8	0.50
Hood River (near)	88	36	62.2	0.48
Hubbard	85	39	58.4	0.90
Heppner †	88	32	59.2	1.29
Jacksonville	92	40	62.6	0.58
Joseph †	83	30	56.4	0.73
Langlois	90	40	66.0	2.06
Lone Rock	88	29	56.8	0.56
McMinnville *a* †	89	34	59.3	2.14
Mount Angel †	88	38	61.0	1.89
Newberg	93	41	62.7	2.00
New Bridge	94	34	65.4	0.13
Pendleton	95	31	60.7	0.35
Sparta	88	35	61.4	0.44
The Dalles †	93	41	63.8	0.14
Toledo	85	40	59.5	1.82
Vale	88	32	60.6	0.37
Vernonia *† [1]	92	38	58.1	3.07
Williams	91	35	61.0	0.53
South Dakota.				
Travare †	97	31	60.5	.....
Texas.				
Big Spring	.....	.....	.....	1.59
Utah.				
Ogden *a* *† [1]	93	58	73.2	0.25
Parowan †	.....	.....	.....	0.00
West Virginia.				
Buckhannon *b* † [1]	84	36	61.7	.....

Received too late for publication in August, 1892.

Alabama.				
Uniontown	94	65	77.7	3.27
Arizona.				
New River †	108	63	86.2	1.14
California.				
Riverside *b*	105	48	75.2	0.00
Colorado.				
Brandon	.....	.....	.....	0.00
Greenhorn †	95	44	66.2	1.88
Idaho Springs † [1]	87	34	61.0	0.84
Le Roy *† [2] [d]	100	47	70.6	1.83
Idaho.				
Martin †	88	34	63.2	0.02
Iowa.				
Sac City † [1]	92	41	72.6	1.25
Kansas.				
Mankato † [1]	96	45	75.5	1.00
Louisiana.				
Franklin †	94	70	84.2	5.00
Mississippi.				
Pontotoc † [1]	91	64	77.4	3.09
Missouri.				
Marble Hill	86	59	75.8	2.33
Rolla †	.....	.....	.....	4.47
Nebraska.				
Holdrege [2]	.....	.....	76.4	4.11
North Carolina.				
Washington †	97	55	76.6	5.62
Texas.				
Mesquite † [1]	98	62	78.0	2.73
Washington.				
Centerville †	95	40	69.4	0.07
Chehalis †	88	42	63.4	0.65

Reports received too late, &c.—Continued.

Stations.	Temperature. (Fahrenheit.) Max.	Min.	Mean	Precip'n.
Washington—Cont'd	°	°	°	*Ins.*
Chelan †	95	50	72.8	T.
Fort Simcoe	97*	49	73.8[2]	0.00
Fort Spokane	98	43	68.5	0.38
Fort Townsend	80	44	60.6	1.14
Olga † [1]	75	47	57.2	0.68
Washington—Cont'd	°	°	°	*Ins.*
Pomeroy †	96	56	72.2	0.20
Vashon	86	42	64.0	T.
Mexico.				
Masatlan	90	73	82.0	3.47
Mexico	78	51	63.8	3.71

*Extremes of temperature from observed readings of dry thermometer.

† Weather Bureau instruments.

A numeral following the name of a station indicates the hours of observation from which the mean temperature was obtained, thus:

[1] Mean of 7 a. m. + 2 p. m. + 9 p. m. + 9 p. m. ÷ 4.
[2] Mean of 8 a. m. + 8 p. m. ÷ 2.
[3] Mean of 7 a. m. + 7 p. m. ÷ 2.
[4] Mean of 6 a. m. + 6 p. m. ÷ 2.
[5] Mean of 7 a. m. + 2 p. m. ÷ 2.
[6] Mean from readings at various hours reduced to true daily mean by special tables.
[7] Mean from hourly readings of thermograph.

The absence of a numeral indicates that the mean temperature has been obtained from daily readings of the maximum and minimum thermometers.

An Italic letter following the name of a station, as "Livingston *a*," "Livingston *b*," indicates that two or more observers, as the case may be, are reporting from the same station. A small Roman letter following the name of station indicates the number of days missing from the record, for instance, "s" denotes 14 days missing.

A small Roman letter in figure columns indicates the number of days missing from the record; example, "4" four days missing, etc.

Corrections: August, 1892, Colorado, T. S. Ranch, make minimum temperature 39, and precipitation 0.63. January, 1892, Arkansas, Dallas, make precipitation 2.84 instead of 2.64; Harrison, make precipitation 3.80 instead of 2.40; Ozone, make precipitation 2.75 instead of 2.35. Florida, Myers, make mean temperature 60.2 instead of 70.4. March, 1892, Arkansas, Osceola, make precipitation 3.13 instead of 2.13.

NOTE.—The following changes have been made in names of stations: South Carolina, Belmont, changed to Longshore.

Data from Canadian stations for the month of September, 1892.

Station.	Pressure. Mean not reduced.	Mean reduced.	Departure from normal.	Temperature. Mean.	Departure from normal.	Precipitation. Total.	Departure from normal.	Prevailing direction of wind.
	Inches.	*Inches.*	*Inches.*	°	°	*Inches.*	*Inches.*	
Saint Johns, N. F	29.94	30.08	.....	55.5	+ 0.1	3.12	.....	n.
Sydney, C. B. I	30.01	30.07	+ .05	57.8	+ 1.8	2.56	— 0.68	sw.
Anticosti Island	.....	.....	.....	.....	.....	.....	.....	.....
Halifax, N. S	29.98	30.11	+ .05	58.2	+ 1.7	1.74	— 1.81	sw.
Grand Manan, N. B	30.04	30.09	.....	57.2	.....	2.48	+ 0.68	w.
Yarmouth, N. S	30.05	30.13	+ .06	57.0	+ 1.5	2.89	+ 0.30	sw.
Saint Andrews, N. B	30.01	30.06	.....	55.4	.....	1.16	— 1.46	nw.
Charlottetown, P. E. I	30.01	30.05	.....	58.4	.....	0.60	— 2.26	sw.
Chatham, N. B	30.00	30.02	— .01	56.2	+ 3.2	1.58	— 1.14	w.
Father Point, Que	29.94	29.97	— .01	52.0	+ 2.0	2.59	— 0.21	w.
Quebec, Que	29.72	30.04	+ .03	55.1	+ 0.1	3.53	— 0.14	w.
Montreal, Que	29.86	30.06	+ .04	57.6	+ 0.1	3.02	— 0.21	s.
Rockliffe, Ont	29.51	30.02	+ .01	52.4	— 0.1	4.98	+ 1.28	se.
Kingston, Ont	29.77	30.08	+ .05	59.6	+ 0.1	1.49	— 1.28	sw.
Toronto, Ont	29.72	30.10	+ .04	58.4	+ 0.4	3.13	+ 0.38	w.
White River, Ont	28.67	30.02	.....	48.8	.....	1.56	.....	s.
Port Stanley, Ont	29.47	30.10	.....	58.9	.....	4.22	+ 1.57	w.
Saugeen, Ont	29.38	30.08	+ .06	57.3	+ 0.8	4.89	+ 1.38	e.
Parry Sound, Ont	29.37	30.06	+ .03	56.1	+ 0.6	4.66	+ 0.33	sw.
Port Arthur, Ont	29.26	29.96	.00	51.6	+ 1.1	3.08	— 0.39	nw.
Winnipeg, Man	29.12	29.94	+ .02	53.0	+ 4.0	0.86	— 1.14	s.
Minnedosa, Man	28.14	29.93	+ .01	50.2	+ 3.7	0.66	— 0.76	e.
Qu'Appelle, Assiniboia	27.70	29.93	+ .01	52.0	+ 3.5	0.72	— 0.42	nw.
Medicine Hat, Assiniboia	27.67	29.89	+ .01	55.4	+ 0.9	0.22	— 0.63	sw.
Swift Current, Assiniboia	27.38	29.93	— .01	54.0	+ 3.0	0.54	— 0.59	s.
Calgary, Alberta	26.40	29.91	+ .01	50.4	+ 0.9	0.50	— 0.40	w.
Prince Albert, Saskatch'n	28.36	29.86	.....	49.8	.....	1.06	.....	w.
Esquimalt, B. C.	.....	.....	.....	.....	.....	.....	.....	.....
Stony Mountain, Man	.....	.....	.....	.....	.....	.....	.....	.....
Spences Bridge, B. C	29.07	29.88	.....	62.4	.....	0.52	.....	w.
Sandy Point, N. F	29.97	29.99	.....	55.4	.....	0.34	.....	sw.
Edmonton, Alberta	27.56	29.88	— .02	49.4	+ 0.8	0.70	— 0.79	s.
Battleford, Saskatchew'n	.....	.....	.....	.....	.....	.....	.....	.....
Grindstone, Gulf St. L.	29.96	29.99	.....	57.0	.....	2.81	.....	sw.
Hamilton, Bermuda	.....	.....	.....	.....	.....	.....	.....	.....
Late reports, Aug., 1892.								
Anticosti Island	29.96	29.99	+ .12	57.0	— 2.0	3.15	.....	se.
Sable Island	30.02	.....	.....	65.4	.....	17.92	.....	sw.
Sandy Point	29.96	29.98	.....	60.2	.....	1.39	.....	sw.
Late reports, July, 1892.								
Sable Island	30.01	.....	.....	62.0	.....	0.69	.....	sw.

Table of miscellaneous meteorological data for September, 1892—Weather Bureau observations.

Districts and stations.	Elevation above sea-level, feet.	Length of record, years.	Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.								Humidity and precipitation.				Wind.					Cloudless days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Mean temperature data since opening of station.				
			Mean pressure, 8 a. m. and 8 p. m. + 2.	Mean reduced.	Departure from normal.	Mean max. and min. + 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.					Highest for month.	Year.	Lowest for month.	Year.
New England.						61.2	+ 0.2										2.47	— 0.8													
Eastport	53	20	30.02	30.08	+ .05	57.2	+ 2.0	73	15	64	42	29	50	22	50	80	1.21	— 2.3	6	5,442	sw.	28	s.	14	10	16	4	5.0	58.4	1891	53.4	1875
Portland	103	21	30.00	30.10	+ .05	59.2	+ 1.5	76	30	68	42	30	51	34	51	78	2.89	— 0.4	7	5,752	sw.	30	s.	14	16	8	6	3.9	64.2	1881	55.8	1888
Manchester	247	6	29.88	30.14	.....	59.8	.....	79	5	71	34	30	48	42	50	75	1.39	.....	4	3,078	nw.	27	w.	26	17	8	5	3.2	64.5	1891	56.4	1887
Mount Washington	6,279	22	23.89	30.08	+ .05	40.0	.....	57	4	45	21	27	35	24	32	79	6.07[b]	.....	14[b]	15,638	w.	100[a]	nw.	27	5[b]	11[b]	12[b]	6.5	48.6	1881	35.2	1875
Northfield	872	6	29.19	30.12	.....	56.0	.....	78	5	68	30	21	44	43	49	81	1.74	.....	8	5,754	s.	33	w.	26	11	9	10	5.0	60.6	1891	52.6	1887
Boston	125	22	30.02	30.15	+ .08	62.5	+ 0.4	80	19	71	46	11	54	27	52	74	1.90	— 1.3	8	7,723	sw.	36	w.	26	21	3	6	3.1	66.7	1891	59.3	*
Nantucket	14	6	30.16	30.17	.....	62.6	.....	75	19	68	51	30	58	15	56	81	2.01	.....	7	7,176	sw.	36	ne.	5	15	8	7	4.6	65.4	1891	60.5	1887
Woods Holl	.....	15	.....	.....	.....	62.9	— 0.5	73	1	68	50	21	57	18	.....	.....	2.85	+ 0.3	8	10,106	sw.	52	sw.	26	18	6	6	4.2	65.8	1881	60.0	1888
Vineyard Haven	.....	6	.....	.....	.....	65.1	.....	81	3	76	43	21	55	34	.....	.....	2.12	.....	8	.....	sw.	.....	.....	.....	14	8	8	....	67.9	1891	61.1	1888
Block Island	27	13	30.14	30.18	+ .10	62.6	— 0.1	71	1	67	51	30	58	14	57	82	3.77	+ 0.6	9	9,628	sw.	48	sw.	26	19	5	6	3.5	66.8	1881	60.8	1888
Narragansett Pier	.....	11	.....	.....	.....	62.2	0.0	77	25	71	43	*	53	27	.....	.....	3.58	+ 0.9	6	.....	sw.	.....	.....	.....	23	2	5	....	67.3	1891	59.4	1885
New Haven	107	20	30.03	30.15	+ .06	61.7	— 0.7	79	19	72	43	21	52	29	56	81	1.54	— 2.4	6	5,124	n.	36	se.	14	16	10	4	3.6	69.0	1881	59.7	1887
New London	47	22	30.10	30.15	+ .07	61.6	— 1.3	75	19	70	43	21	54	26	54	79	2.04	— 1.6	7	4,956	nw.	41	s.	14	20	6	4	3.2	68.3	1881	58.4	1871
Mid. Atlantic States.						66.8	— 1.0										1.89	— 2.1													
Albany	85	19	30.05	30.14	+ .07	62.4	— 0.5	80	18	72	44	29	53	29	53	78	2.08	— 1.6	9	4,613	s.	35	se.	14	17	8	5	3.7	70.9	1881	58.5	1875
New York, N. Y	185	22	29.98	30.18	+ .09	66.0	— 0.2	83	19	73	51	27	58	25	54	69	0.87	— 3.1	4	6,300	se.	36	se.	14	16	11	3	3.7	72.2	1881	60.8	1871
Harrisburg	377	5	29.77	30.18	.....	64.4	.....	85	18	73	48	30	56	29	55	78	3.31	.....	9	2,934	w.	30	nw.	26	17	7	6	3.3	69.4	1891	61.6	1888
Philadelphia	117	22	30.06	30.18	+ .08	66.8	— 0.4	86	5	76	51	2	58	28	56	75	2.06	— 1.4	6	6,365	se.	41	n.	26	16	9	5	3.7	74.8	1881	62.6	1871
Atlantic City	53	19	30.13	30.18	+ .10	65.6	— 0.6	80	25	72	48	27	59	23	58	77	1.08	— 2.4	6	7,566	e.	38	se.	13	14	13	3	3.7	72.6	1881	60.2	1888
New Brunswick	.....	.....	.....	.....	.....	63.6	.....	85	5	74	39	30	53	33	.....	.....	1.75	.....	8	.....	se.	.....	.....	.....	11	13	6	.....	.....	.....	.....	.....
Baltimore	179	22	29.98	30.17	+ .07	66.2	— 2.0	88	5	75	49	15	58	30	56	72	2.30	— 1.5	9	4,867	se.	38	nw.	26	19	6	5	3.4	76.9	1881	63.4	1871
Washington, D. C.	112	22	30.06	30.18	+ .07	66.1	— 1.3	88	5	76	48	30	56	34	55	74	3.55	— 0.4	8	3,905	e.	36	nw.	26	15	7	8	4.0	77.0	1881	62.3	1871
Cape Henry	.....	19	.....	.....	.....	70.2	— 2.2	84	5	76	54	29	65	24	.....	.....	1.40	— 3.4	6	.....	ne.	.....	.....	.....	17	7	6	....	77.5	1881	68.6	1889
Lynchburg	685	22	29.46	30.19	+ .10	67.2	— 1.7	87	25	78	46	28	57	35	58	79	2.31	— 1.6	9	2,448	e.	23	e.	12	18	9	3	3.5	78.4	1881	62.1	1871
Norfolk	57	22	30.11	30.17	+ .08	70.7	— 0.5	84	5	77	53	28	64	26	63	80	1.33	— 3.5	5	5,311	ne.	36	se.	13	16	9	5	3.5	77.5	1881	67.5	1871
S. Atlantic States.						73.5	— 1.0										6.86	+ 1.1													
Charlotte	773	14	29.34	30.14	+ .05	69.6	— 0.8	89	5	80	49	28	60	30	57	72	2.27	— 1.2	7	4,188	ne.	23	sw.	13	17	6	7	3.9	77.4	1881	68.0	1879
Hatteras	11	12	30.14	30.15	+ .08	73.5	0.0	82	11	78	61	28	70	13	66	80	4.49	— 2.2	14	8,967	n.	44	nw.	26	7	14	9	5.7	78.7	1881	70.9	1887
Kittyhawk	9	17	30.12	30.13	.....	71.8	— 1.4	83	5	76	58	29	68	20	64	78	2.13	— 3.0	10	10,939	ne.	45	ne.	26	9	10	11	5.0	77.4	1881	70.0	1879
Raleigh	388	6	29.75	30.16	.....	69.8	.....	87	25	80	48	28	60	31	61	77	1.98	.....	8	3,396	n.	18	nw.	26	13	8	9	4.6	72.0	1891	67.3	1887
Southport	34	17	30.09	30.12	.....	72.6	— 1.3	83	6	79	55	28	66	26	66	81	4.68	— 1.0	13	6,361	ne.	35	se.	12	10	9	11	4.9	77.8	1881	71.0	1887
Wilmington	78	22	30.05	30.13	+ .06	72.6	— 0.6	87	26	80	55	28	65	22	64	81	5.90	— 0.9	10	5,464	ne.	25	e.	11	10	12	8	5.1	78.8	1881	70.1	1871
Charleston	52	22	30.00	30.11	+ .05	74.6	— 0.8	89	26	80	63	28	69	20	68	83	11.77	+ 5.7	12	6,966	ne.	42	e.	12	2	19	9	6.2	80.7	1881	72.6	1871
Columbia	.....	6	.....	.....	.....	74.8	.....	92	1	82	58	28	68	25	.....	.....	4.04	.....	10	.....	ne.	.....	.....	.....	16	5	9	....	74.8	1892	71.6	1888
Augusta	209	21	29.93	30.15	+ .07	72.9	— 2.5	90	1	82	51	28	64	29	62	75	5.49	+ 1.5	7	3,881	e.	26	s.	13	16	7	7	4.4	79.4	1881	72.9	1892
Savannah	98	22	30.00	30.11	+ .05	75.0	— 0.5	90	26	82	59	28	68	22	68	85	10.95	+ 4.9	15	5,765	ne.	28	e.	30	1	22	7	6.7	80.0	1881	71.6	1871
Jacksonville	43	21	30.02	30.07	+ .04	76.8	— 0.9	92	1	84	66	28	70	21	71	86	14.04	+ 6.1	21	5,187	ne.	31	sw.	13	0	8	22	8.5	79.9	1881	76.1	1887
Florida Peninsula.																															
Jupiter	28	5	29.99	30.02	.....	79.4	.....	91	14	86	69	26	73	18	76	87	14.43	.....	23	5,510	ne.	27	se.	17	0	24	6	6.3	79.8	1889	79.0	*
Key West	22	22	29.99	30.01	+ .02	81.8	— 0.2	90	8	87	69	27	77	16	74	77	4.05	— 3.3	14	5,058	e.	34	ne.	17	0	21	9	6.6	84.5	1877	80.3	1890
Micco	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.01[a]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tampa	36	....	30.00	30.04	.....	79.8	.....	93	6	88	68	28	72	21	73	88	6.67	.....	25	4,208	ne.	27	sw.	13	0	21	9	6.5	.....	.....	.....	.....
Titusville	44	6	30.00	30.04	.....	78.2	.....	90	13	84	09	27	72	18	73	85	16.67	.....	25	7,763	ne.	42	ne.	29	3	17	10	6.4	79.4	1889	77.8	1887
Eastern Gulf States.						74.3	— 1.6										3.31	— 1.3													
Atlanta	1,131	14	28.96	30.13	+ .03	70.0	— 1.2	85	25	79	50	15	61	26	59	74	2.70	— 1.8	5	6,152	ne.	26	ne.	27	15	12	3	3.7	74.9	*	68.8	1888
Pensacola	56	13	29.98	30.04	+ .01	76.8	— 0.7	92	26	84	60	16	69	22	67	76	1.72	— 3.9	6	6,739	e.	45	s.	13	18	8	4	3.5	79.5	1884	75.3	1882
Auburn †	.....	11	.....	.....	.....	71.6	.....	86	26	80	52	15	63	25	.....	.....	2.07	.....	4	.....	e.	.....	.....	.....	15	11	4	....	77.6	1884	71.7	*
Mobile	35	22	30.00	30.04	+ .01	75.2	— 1.7	90	26	84	58	16	67	26	66	80	4.93	— 0.2	15	4,764	n.	25	ne.	13	9	16	5	4.9	79.3	1881	74.9	*
Montgomery	257	21	29.81	30.08	+ .03	73.4	— 2.1	90	26	84	55	*	63	27	63	76	2.08	— 0.5	6	4,324	ne.	24	e.	11	17	7	6	3.5	79.0	1884	73.2	1880
Meridian	358	....	29.70	30.08	.....	70.8	.....	89	26	82	48	15	60	31	63	82	0.57	.....	3	1,624	ne.	21	s.	4	19	10	1	2.4	.....	.....	.....	.....
Vicksburg	254	22	29.80	30.06	+ .01	73.6	— 2.1	89	24	83	56	15	64	28	64	77	1.48	— 2.6	5	4,277	ne.	21	ne.	26	23	4	3	2.7	79.7	1872	71.7	1880
University	.....	6	.....	.....	.....	70.8	.....	91	25	82	49	15	59	32	.....	.....	0.91	.....	6	.....	se.	.....	.....	.....	21	5	4	....	75.9	1887	70.8	*
New Orleans	54	22	29.98	30.04	+ .03	76.6	— 1.6	89	26	83	64	15	70	17	66	74	6.33	+ 1.4	12	6,583	ne.	30	ne.	8	17	9	4	3.2	80.9	1884	73.6	1878
Port Eads †	.....	....	30.05	.....	.....	78.4	.....	90	15	83	65	30	74	19	71	82	12.50	.....	15	.....	ne.	32	ne.	27	0	16	14	7.6	.....	.....	.....	.....
Western Gulf States.						74.7	— 0.8										1.60	— 2.7													
Shreveport	249	22	29.81	30.07	+ .03	73.4	— 3.0	92	26	85	55	14	62	27	63	75	1.56	— 2.7	4	3,132	se.	20	e.	8	22	5	3	2.8	80.2	1884	70.5	1880
Fort Smith	492	11	29.59	30 10	+ .08	71.5	— 0.9	92	25	84	48	14	59	33	59	72	1.84	— 1.4	4	3,936	e.	18	e.	11	24	4	2	2.0	77.3	1884	69.8	1890
Little Rock	309	14	29.77	30.10	+ .04	71.4	— 2.0	90	25	81	53	15	62	26	61	76	3.54	+ 0.1	2	2,750	e.	18	ne.	26	23	4	3	2.7	76.6	1884	58.8	1880
Corpus Christi	20	6	30.02	30.04	.....	78.4	.....	92	28	84	65	13	72	20	71	79	2.04	.....	10	7,433	e.	31	ne.	9	10	12	8	5.1	79.4	1887	75.9	1889
Galveston	42	22	30.01	30.05	+ .05	78.6	— 0.1	88	26	83	67	13	74	13	70	78	0.58	— 6.5	8	7,680	ne.	33	ne.	11	24	4	2	2.7	83.5	1884	76.9	1875
Palestine	511	11	29.52	30.00	+ .01	75.2	— 0.2	92	26	86	57	13	64	30	60	68	0.98	— 2.4	2	3,389	ne.	18	n.	11	17	10	3	3.4	79.6	1884	71.9	1889
San Antonio	679	14	29.36	30.07	+ .06	77.9	+ 1.2	95	28	89	55	13	66	34	60	62	1.09	— 3.1	5	3,505	ne.	25	ne.	11	17	10	3	3.4	80.3	1877	73.6	1889
Ohio Val. & Tenn.						68.7	+ 0.1										2.80	— 0.3													
Chattanooga	783	14	29.33	30.14	+ .05	69.6	— 1.6	87	25	80	49	28	59	28	60	81	5.42	+ 1.0	6	2,466	n.	19	w.	19	13	14	3	3.9	74.6	1881	67.6	*
Knoxville	980	22	29.13	30.16	+ .06	69.2	— 0.7	87	25	81	45	28	58	34	57	71	0.63	— 2.5	5	2,548	ne.	23	e.	9	18	9	3	3.0	74.1	1881	65.4	1875
Memphis	330	22	29.77	30.12	+ .05	72.0	— 0.4	90	25	82	52	28	62	29	59	70	0.98	— 2.4	5	3,688	n.	32	sw.	4	24	3	3	1.8	76.9	1884	68.2	1871
Nashville	553	22	29.54	30.12	+ .06	70.0	— 0.4	88	8	81	47	15	59	33	59	76	4.78	+ 0.8	7	2,128	se.	17	nw.	13	16	7	7	4.0	75.6	1881	67.7	1880
Lexington	.....	8	29.07	.....	.....	68.4	+ 0.7	88	9	78	47	27	59	26	56	70	4.10	+ 1.6	9	6,306	sw.	36	w.	13	17	8	5	3.7	71.7	1891	62.8	1888
Louisville	551	21	29.53	30.12	+ .04	69.4	0.0	89	3	80	47	28	59	32	54	64	2.43	— 0.5	4	3,330	se.	26	w.	13	15	8	7	4.1	75.9	1881	64.0	1879
Indianapolis	766	22	29.31	30.12	+ .05	67.4	+ 2.2	88	23	79	42	27	56	32	53	68	2.42	— 0.5	6	3,546	nw.	22	sw.	10	13	10	7	4.4	73.5	1881	61.7	1879
Cincinnati	628	22	29.46	30.13	+ .06	67.8	— 0.4	86	10	78	48	*	58	28	57	74	3.78	+ 1.4	7	3,904	se.	36	nw.	13	14	8	8	4.2	76.1	1881	63.7	1879
Columbus	837	15	29.25	30.14	+ .08	66.4	+ 1.2	85	4	77	42	27	55	30	54	70	1.47	— 1.3	9	4,161	se.	32	sw.	13	14	10	6	4.5	73.7	1881	61.3	1888
Pittsburg	820	22	29.29	30.15	+ .07	66.5	+ 0.3	80	4	77	46	7	56	33	53	68	2.04	— 0.6	9	4,425	w.	38	nw.	25	11	10	9	4.9	75.4	1881	59.3	1871
Parkersburg	638	5	29.48	30.16	.....	66.2	.....	87	4	78	40	27	54	38	56	79	2.85	.....	8	2,778	se.	25	nw.	26	18	9	3	3.3	09.0	1891	61.9	1888
Lower Lake Region.						63.4	+ 1.0										2.66	— 0.4													
Buffalo	090	22	29.36	30.10	+ .05	62.2	+ 1.1	80	11	70	43	20	54	25	52	69	2.27	— 1.1	11	7,669	sw.	48	sw.	14	11	16	3	3.9	71.3	1881	57.5	1883
Oswego	335	22	29.74	30.10	+ .04	61.3	+ 0.6	82	25	69	44	29	54	30	51	72	1.52	— 1.4	12	7,553	se.	51	nw.	26	15	9	6	3.8	70.3	1881	57.5	1883
Rochester	523	21	29.56	30.12	+ .07	63.1	+ 1.9	86	4	73	44	7	53	32	52	72	1.55	— 0.9	10	5,585	sw.	32	sw.	25	14	8	8	4.3	71.2	1881	56.2	1871
Erie	714	20	29.35	30.10	+ .04	63.0	+ 0.1	83	4	70	44	20	56	24	53	72	3.19	— 1.0	12	8,376	s.	36	se.	13	12	10	8	4.6	71.7	1881	58.8	1883
Cleveland	740	22	29.33	30.11	+ .04	64.0	+ 1.1	84	4	72	45	17	56	26	55	77	2.53	— 1.3	12	8,689	se.	54	nw.	13	17	5	8	3.8	71.7	1881	59.5	1883
Sandusky	629	16	29.45	30.12	+ .06	65.2	+ 1.0	88	24	73	45	27	57	26	55	75	2.69	— 0.4	7	5,590	sw.	36	w.	25	11	14	5	4.5	72.5	1881	60.4	1879
Toledo	674	22	29.43	30.14	+ .09	64.6	+ 1.4	86	11	74	43	27	56	26	55	80	3.88	+ 1.4	9	5,959	w.	31	nw.	25	17	8	5	3.9	72.1	1881	59.8	1871
Detroit	724	22	29.33	30.10	+ .04	63.4	+ 1.0	86	24	72	45	27	55	26	54	76	3.66	+ 1.1	8	6,703	sw.	34	nw.	25	14	12	4	3.8	72.3	1881	58.2	*
Upper Lake Region.						60.7	+ 2.1										2.20	— 1.3													
Alpena	609	21	29.41	30.06	+ .05	58.4	+ 2.2	92	24	68	37	20	48	40	53	87	2.85	— 1.2	9	6,150	se.	27	s.	11	13	10	7	4.1	62.4	1881	52.8	1883
Cheboygan	591	....	29.41	30.04	.....	58.0	.....	88	24	67	35	20	49	32	51	80	2.32	.....	7	4,850	s.	30	sw.	27	12	10	8	4.4	...	.....	.....	.....
Escanaba	.....	22	.....	.....	.....	58.2	+ 1.6	82	27	68	34	1	48	40	.....	.....	1.34	— 2.7	7	.....	s.	.....	.....	.....	12	10	8	....	62.4	1891	52.0	1873
Grand Haven	628	22	29.41	30.08	+ .05	61.6	+ 2.2	80	9	70	42	1	54	29	54	79	1.72	— 2.0	11	6,193	sw.	30	nw.	25	14	8	8	4.6	67.4	1881	55.2	1888
Manistee	615	5	29.41	30.07	.....	60.6	.....	82	24	68	42	20	53	28	53	80	3.62	.....	13	5,546	sw.	36	nw.	22	13	12	5	4.2	63.4	1891	54.4	1888
Marquette	734	22	29.20	29.98	— .01	59.4	+ 4.0	89	24	68	40	1	50	32	50	78	1.18	— 3.2	10	7,812	nw.	36	w.	27	15	9	6	4.1	63.2	1891	52.2	1873
Port Huron	639	19	29.44	30.12	+ .08	62.0	+ 1.8	86	24	71	41	27	53	34	53	80	5.47	+ 3.1	13	6,721	s.	38	nw.	13	16	10	4	3.6	68.4	1881	55.6	1879
Sault Ste. Marie	642	5	29.33	30.02	.....	56.4	.....	88	24	65	36	27	47	35	49	82	1.79	.....	10	6,063	nw.	35	se.	10	5	9	16	6.8	59.2	1891	52.6	1888
Chicago	824	22	29.21	30.08	+ .04	63.9	+ 0.4	88	23	71	46	15	57	28	52	70	1.34	— 1.6	10	11,092	sw.	40	sw.	10	15	10	5	4.0	69.5	1881	59.8	1888
Milwaukee	673	22	29.35	30.07	+ .03	62.4	+ 1.4	85	24	70	45	0	55	26	52	74	2.21	— 0.7	5	6,692	se.	27	w.	25	17	8	5	3.8	67.2	1891	56.9	1883
Green Bay	617	7	29.40	30.06	+ .02	60.6	+ 1.1	82	23	71	42	16	50	31	51	76	3.40	+ 0.2	7	5,652	s.	30	sw.	5	7	16	7	5.5	66.0	1891	57.0	1888
Duluth	656	22	29.28	29.98	.00	59.4	+ 4.0	85	24	67	44	25	52	33	50	77	0.32	— 3.9	5	4,738	e.	25	nw.	24	16	2	12	5.0	61.6	1891	50.6	1886
Extreme Northwest.						59.6	+ 4.2										0.60	— 1.0													
Moorhead	935	12	28.97	29.98	+ .02	60.6	+ 4.9	89	23	72	34	14	49	45	51	81	0.33	— 2.1	5	8,067	n.	36	se.	20	16	6	8	4.4	62.0	1891	53.2	1881
Saint Vincent	804	13	29.09	29.95	.00	75.7	+ 4.3	85	17	71	31	26	45	54	49	84	1.30	— 0.8	8	6,642	n.	34	s.	1	13	8	9	4.7	58.2	1891	50.4	1886

Table of miscellaneous meteorological data for September, 1892—Weather Bureau observations—Continued.

Districts and stations.	Elevation above sea-level, feet.	Length of record, years.	Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.								Humidity and precipitation.					Wind.					Cloudless days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Mean temperature data since opening of station.				
			Mean pressure, 8 a. m. and 8 p. m. + 2.	Mean reduced.	Departure from normal.	Mean max. and min. + 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.	Departure from normal.	Days with .01 or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.					Highest for month.	Year.	Lowest for month.	Year.
Ex. Northwest—Con.																															
Bismarck	1,698	18	28.17	29.96	+ .01	60.2	+ 3.6	94	17	73	36	13	48	45	46	70	0.66	— 0.5	7	6,105	nw.	33	ne.	2	13	9	8	4.4	61.8	1891	52.8	1881
Fort Buford	1,899	14	27.98	29.97	+ .02	59.0	+ 4.0	93	28	75	33	13	45	51	42	63	0.11	— 0.8	3	5,187	w.	32	nw.	9	11	9	10	5.1	59.9	1892	51.4	1881
Upper Miss. Valley.						60.1	+ 1.6										2.33	— 1.3													
Minneapolis	.....	....	.....	.....	.....	63.4	.....	85	23	73	43	26	54	29	.....	.....	1.45	.....	6	.....	s.	....	.....	...	17	7	6	.....	....	....	.....	....
Red Wing	758	....	29.21	30.02	.....	63.0	.....	87	24	72	40	26	54	32	54	78	3.38	.....	8	5,958	e.	42	s.	9	13	11	6	4.4	....	....	.....	....
Saint Paul	850	23	29.13	30.03	+ .04	62.6	+ 2.9	86	23	72	42	16	53	32	51	74	1.72	— 1.4	5	5,094	se.	24	nw.	24	13	10	7	4.3	65.6	1891	53.7	1873
La Crosse	720	20	29.29	30.06	+ .05	62.6	+ 2.2	86	23	72	41	6	53	33	52	73	3.07	— 1.6	4	4,832	s.	36	nw.	10	13	12	5	4.6	67.4	1891	50.6	1873
Davenport	613	21	29.45	30.10	+ .06	65.6	+ 1.4	90	23	75	44	6	56	31	54	75	2.09	— 1.2	4	5,266	sw.	30	nw.	10	11	8	11	5.1	69.8	1881	60.5	1879
Des Moines	869	15	29.13	30.05	+ .04	65.8	+ 2.4	92	23	77	39	14	55	33	54	73	1.12	— 2.4	7	4,752	sw.	34	se.	8	17	4	9	3.7	68.2	1891	59.4	1883
Dubuque	651	20	29.37	30.06	+ .03	64.2	+ 1.8	84	30	73	42	6	55	28	55	80	3.79	— 0.7	5	2,980	s.	19	nw.	13	9	13	8	5.0	69.3	1891	58.7	1873
Keokuk	613	22	29.43	30.08	+ .05	67.4	+ 2.0	90	23	78	45	14	57	29	56	73	3.21	— 0.5	5	3,480	s.	20	sw.	10	19	6	5	3.1	72.4	1881	62.7	*
Cairo	359	22	29.73	30.12	+ .07	70.0	+ 0.3	88	25	80	49	14	60	27	62	80	0.90	— 1.7	3	3,704	s.	26	nw.	26	16	10	4	3.2	75.1	1881	66.5	1890
Springfield, Ill.	644	14	29.42	30.09	+ .03	66.4	+ 0.7	88	23	77	46	27	56	30	54	73	3.48	0.0	6	4,827	s.	24	nw.	13	18	7	5	3.3	72.1	1881	62.5	1879
Hannibal	534	....	29.52	30.09	.....	66.9	.....	90	23	78	44	27	56	36	56	74	2.36	.....	5	4,871	sw.	30	sw.	7	19	6	5	3.3	....	....	.....	....
Saint Louis	571	22	29.49	30.10	+ .05	70.3	+ 1.1	90	*	80	48	14	61	27	56	68	1.59	— 1.8	6	5,982	sw.	25	nw.	13	22	4	4	2.4	75.3	1881	64.9	1879
Missouri Valley.						66.7	+ 3.1										0.94	— 1.8													
Columbia	.....	....	.....	.....	.....	66.7	.....	91	23	79	40	14	55	38	.....	.....	4.50	.....	6	3,863	se.	24	n.	28	23	2	5	2.5	....	....	.....	....
Kansas City	963	5	29.06	30.06	.....	70.1	.....	94	22	81	46	14	60	30	55	66	4.05	.....	4	4,918	se.	22	nw.	10	18	9	3	3.1	71.6	1891	63.2	1890
Springfield, Mo.	1,396	6	28.68	30.89	+ .05	68.8	+ 1.1	90	25	80	44	14	58	31	55	72	0.90	— 2.6	5	6,012	se.	26	e.	28	21	5	4	2.9	71.4	1891	63.4	1890
Leavenworth	857	22	29.17	30.07	+ .05	69.6	+ 2.2	91	22	81	42	14	59	36	56	70	1.23	— 2.4	4	5,412	s.	28	sw.	10	12	12	6	4.6	71.7	1884	63.4	1883
Topeka	.....	6	.....	.....	.....	70.5	.....	92	22	82	44	14	59	34	.....	.....	0.90	.....	4	.....	se.	....	.....	...	20	9	1	....	70.7	1891	63.2	1889
Omaha	1,113	22	28.88	30.04	+ .01	68.2	+ 3.8	96	23	79	42	14	58	33	54	68	1.63	— 1.6	7	4,862	s.	24	s.	23	19	9	2	3.2	70.0	1891	60.4	1873
Crete	.....	6	.....	.....	.....	68.2	.....	96	23	82	34	14	54	49	.....	.....	0.18	.....	2	.....	s.	....	.....	...	23	4	3	....	69.5	1891	63.0	1889
Valentine	2,613	8	27.32	30.00	— .02	64.6	+ 4.2	93	29	79	36	13	50	46	48	65	0.86	— 0.5	3	6,270	s.	45	w.	21	18	9	3	4.0	65.1	1891	58.4	1889
Sioux City	1,165	....	28.78	30.00	.....	66.0	.....	91	23	78	36	14	54	40	53	73	0.57	.....	6	6,900	s.	49	w.	21	18	8	4	3.4	....	....	.....	....
Pierre	1,470	....	28.41	29.95	.....	65.8	.....	87	29	80	39	13	51	46	48	63	1.32	.....	4	5,205	se.	46	ne.	6	18	8	4	3.6	....	....	.....	....
Huron	1,310	12	28.59	29.97	— .03	62.7	+ 3.6	98	23	78	39	14	47	52	48	70	0.59	— 1.0	5	9,014	se.	48	se.	7	17	7	6	3.6	66.0	1891	55.5	1881
Yankton	1,232	20	28.71	30.00	+ .02	66.4	+ 3.5	93	23	79	38	14	54	45	51	69	0.36	— 2.5	3	5,747	nw.	36	s.	2	17	9	4	3.6	68.3	1891	58.7	1876
Northern Slope.						61.9	+ 3.6										0.32	— 0.8													
Havre‡	2,477	13	27.34	29.92	— .04	58.4	+ 3.8	92	28	75	29	25	42	54	41	63	0.44	— 0.8	5	6,371	sw.	48	sw.	23	12	13	5	4.7	61.0	1888	50.2	1884
Miles City	2,374	....	27.47	29.91	.....	63.8	.....	93	28	78	39	*	49	46	43	58	0.52	.....	5	3,497	nw.	30	nw.	9	14	7	9	4.3	....	....	.....	....
Helena	4,118	13	25.83	29.97	— .02	60.8	+ 4.2	89	28	74	34	24	48	38	34	44	0.26	— 0.9	5	4,978	sw.	35	sw.	23	12	7	11	4.8	62.6	1888	49.7	1884
Rapid City	3,280	7	26.66	29.97	— .02	64.4	+ 3.4	96	29	78	35	13	50	41	42	54	0.13	— 0.5	5	6,326	sw.	36	w.	19	13	13	2	4.2	64.4	*	58.2	1889
Cheyenne	6,105	22	24.14	29.98	+ .01	61.2	+ 4.5	85	29	77	28	11	46	40	39	54	0.22	— 0.7	3	4,691	nw.	34	w.	18	11	16	3	4.1	61.2	1892	51.8	1878
Lander	5,377	....	24.72	30.01	.....	59.0	.....	85	28	78	28	11	43	48	31	44	0.06	.....	2	3,134	sw.	36	s.	26	16	14	0	3.0	....	....	.....	....
Kearney	2,173	....	27.75	29.98	.....	66.7	.....	93	23	80	42	12	54	35	51	63	0.39	.....	3	7,739	ne.	42	s.	23	16	8	6	3.6	....	....	.....	....
North Platte	2,841	18	27.13	30.04	+ .03	64.6	+ 2.2	92	*	80	38	13	49	47	50	69	0.56	— 1.0	5	5,416	se.	32	se.	20	16	13	1	3.7	65.8	1891	59.8	1889
Middle Slope.						63.6	+ 3.4										0.56	— 0.9													
Denver	5,287	21	24.85	30.00	+ .04	66.0	+ 4.6	92	29	83	36	11	49	43	32	38	T.	— 0.8	0	4,576	s.	36	nw.	20	17	13	0	3.4	66.0	1892	58.5	1878
Pikes Peak	.....	16	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	.....	.....	.....	.....	...	.....	...	...	...	...	...	...	...	...	39.4	1878	29.4	1882
Pueblo	4,734	5	25.34	29.98	.....	68.8	.....	94	7	86	39	12	52	48	31	32	T.	.....	0	4,524	nw.	34	w.	24	14	15	1	3.7	68.8	1892	62.6	1889
Concordia	1,410	8	28.56	30.02	— .02	70.1	+ 3.2	98	27	83	38	14	57	44	56	71	0.65	— 1.9	4	5,112	s.	28	s.	23	23	5	2	1.8	70.6	1891	64.0	1889
Dodge City	2,523	18	27.44	30.01	+ .02	69.8	+ 2.4	96	24	85	40	12	55	40	50	63	1.04	— 0.1	2	8,032	se.	40	ne.	3	21	9	0	2.2	70.3	1884	64.1	1883
Wichita	1,366	5	28.61	30.03	.....	71.6	.....	95	22	83	47	12	60	33	56	66	2.12	.....	4	6,034	s.	25	s.	24	25	4	1	1.8	71.6	1892	66.2	1890
Oklahoma City	1,239	....	28.78	30.07	.....	72.4	.....	94	28	84	49	12	61	30	58	71	1.29	.....	3	6,405	se.	26	nw.	10	25	5	0	1.6	....	....	.....	....
Southern Slope.						68.6	+ 1.6										1.08	— 1.5													
Abilene	1,748	7	28.27	30.06	+ .05	74.3	+ 0.4	94	19	85	52	12	64	29	59	68	1.85	— 1.0	4	6,051	s.	34	nw.	11	21	7	2	2.3	75.9	1887	69.8	1889
Amarillo	3,691	....	26.34	30.01	.....	72.2	.....	93	29	85	48	11	59	35	47	52	0.24	.....	4	11,077	s.	50	n.	10	15	11	4	3.3	....	....	.....	....
Fort Stanton	6,152	9	24.09	29.99	— .01	62.8	+ 3.3	85	15	79	38	12	47	42	30	37	0.32	— 2.0	5	2,934	w.	24	s.	3	16	11	3	3.4	63.0	1891	54.4	1884
Southern Plateau.						76.7	+ 2.8										0.11	— 0.8													
El Paso	3,796	15	26.26	30.01	+ .04	74.6	+ 1.2	94	15	88	53	13	61	34	36	33	0.12	— 1.2	1	3,759	e.	39	w.	22	22	5	3	1.9	77.9	1878	69.1	1882
Santa Fe	7,059	19	23.40	30.01	+ .02	64.8	+ 5.1	81	*	77	44	11	53	28	25	30	T.	— 1.4	0	4,714	se.	31	se.	4	28	1	1	1.7	64.8	1892	56.8	1880
Tucson	2,432	8	27.45	29.88	.....	81.1	+ 3.4	102	26	96	60	22	66	37	45	35	0.37	— 1.1	5	5,083	se.	35	s.	5	23	5	2	2.3	83.2	1879	76.5	1876
Yuma	141	17	29.68	29.82	+ .01	87.2	+ 3.0	111	27	104	60	20	71	40	55	42	0.04	— 0.1	1	3,339	w.	42	sw.	8	25	5	0	1.2	89.2	1888	80.0	1884
Keeler	3,632	8	26.28	29.85	— .02	75.7	+ 1.1	96	12	87	55	19	64	30	39	28	T.	— 0.3	0	4,942	sw.	36	se.	29	25	5	0	0.8	78.3	1888	71.0	1891
Middle Plateau.						66.0	+ 4.2										0.00	— 0.6													
Carson City	4,720	5	25.30	29.95	.....	62.8	.....	87	10	79	36	18	47	42	30	32	0.31	.....	1	.....	.....	.....	.....	...	27	3	0	1.4	65.6	1888	58.2	1891
Winnemucca	4,340	14	25.67	29.95	.00	62.8	+ 2.8	91	13	80	34	21	48	47	22	27	0.13	— 0.2	2	6,976	sw.	46	sw.	24	17	11	2	3.0	66.6	1888	56.4	1881
Salt Lake City	4,345	19	25.67	29.96	.00	69.6	+ 5.7	90	14	83	48	21	56	36	35	32	0.12	— 0.7	4	4,313	se.	36	sw.	28	20	10	0	2.5	70.6	1888	58.8	1884
Montrose	5,795	8	24.38	29.98	.00	65.5	+ 4.1	87	28	82	40	11	49	39	25	28	T.	— 0.8	0	4,166	se.	24	n.	10	24	6	0	2.3	65.5	1892	59.7	1886
Northern Plateau.						63.5	+ 1.9										0.53	— 0.3													
Baker City	3,430	....	26.47	29.94	.....	58.9	.....	88	14	75	30	22	43	48	40	55	0.16	.....	2	3,818	se.	24	s.	8	17	5	8	3.6	....	....	.....	....
Idaho Falls	4,733	....	25.29	29.97	.....	61.7	.....	88	15	80	35	11	44	51	35	45	0.43	.....	3	6,002	sw.	38	s.	26	14	5	11	4.5	....	....	.....	....
Spokane	1,930	12	27.97	29.98	.00	60.4	+ 2.5	86	11	74	30	22	47	40	36	49	0.35	— 0.7	5	3,585	s.	30	s.	23	17	11	2	3.3	64.6	1888	52.5	1884
Walla Walla	1,018	7	28.90	29.96	— .05	66.0	+ 1.3	91	27	79	43	22	55	38	48	56	0.71	+ 0.1	7	3,574	s.	38	s.	23	17	6	7	4.6	69.2	1888	61.2	1887
N. Pac. Coast Region.						68.1	+ 0.7										4.61	+ 1.1													
Clallam Bay	.....	....	.....	.....	.....	56.0	.....	82	12	65	40	*	47	36	.....	.....	8.34	.....	11	.....	w.	....	.....	...	10	2	18	....	....	....	.....	....
Fort Canby	179	10	29.79	29.98	— .03	56.6	— 1.3	75	7	61	47	30	52	22	54	94	4.00	+ 0.6	10	8,182	s.	60	s.	25	6	4	20	7.5	60.0	1883	55.3	1884
Neah Bay	.....	9	.....	.....	.....	56.0	+ 0.8	69	6	64	40	29	48	24	.....	.....	10.91	+ 3.6	11	.....	s.	.....	.....	...	6[b]	5[b]	17[b]	....	57.0	*	53.6	1887
Olympia	44	16	29.94	29.98	— .06	59.8	+ 2.9	82	10	70	40	3	49	37	51	77	3.49	+ 0.7	8	1,636	s.	18	sw.	20	13	8	9	5.3	60.6	1888	54.5	1878
Port Angeles	29	8	29.93	29.96	— .05	54.2	+ 1.5	73	9	61	38	21	47	27	49	85	1.45	— 1.0	12	2,963	w.	30	sw.	20	11	6	13	5.6	55.6	1888	51.0	1884
Port Crescent	.....	....	.....	.....	.....	56.8	.....	76	13	66	37	24	48	26	.....	.....	5.00	.....	10	.....	sw.	....	.....	...	0	10	20	....	....	....	.....	....
Pysht	.....	....	.....	.....	.....	.....	.....	...	...	...	...	...	...	...	.....	.....	.....	.....	...	.....	...	...	...	...	...	...	...	...	55.8	1885	52.1	1889
Tatoosh Island	86	9	29.87	29.97	— .02	54.3	0.0	71	11	59	45	23	50	22	52	93	10.19	+ 5.3	16	8,203	s.	48	e.	12	8	7	15	6.8	56.4	1888	51.2	1890
Astoria	.....	8	.....	.....	.....	58.8	— 1.1	75	7	65	44	30	53	19	.....	.....	4.24	— 0.7	12	.....	sw.	....	.....	...	10	5	15	....	65.4	1888	56.9	1887
Portland	80	21	29.91	30.00	— .03	62.9	+ 1.4	90	11	73	42	21	53	34	53	74	1.63	— 0.1	4	3,706	n.	34	s.	22	12	12	6	4.4	66.0	1888	55.7	1884
Roseburg	523	15	29.43	29.99	— .05	62.4	+ 1.7	91	9	74	41	3	50	39	50	68	0.02	+ 0.2	7	2,134	n.	19	sw.	5	18	5	7	3.7	66.3	1888	58.7	1878
Mid. Pac. Coast Reg.						67.0	+ 1.3										0.16	— 0.2													
Eureka	64	6	29.97	30.03	.....	56.2	.....	68	5	61	43	5	51	25	54	95	0.99	.....	5	2,861	n.	20	n.	21	2	16	12	6.7	57.4	1888	53.2	1890
Red Bluff	342	15	29.60	29.95	+ .03	72.0	— 1.2	103	10	86	53	17	58	43	49	50	0.29	— 0.3	2	3,173	se.	18	nw.	18	24	5	1	1.6	80.2	1888	67.3	1884
Sacramento	64	16	29.87	29.94	.00	68.8	— 1.1	96	7	83	48	17	54	39	54	68	0.18	— 0.1	2	4,609	s.	24	sw.	30	26	3	1	1.4	75.4	1888	64.8	1884
San Francisco	109	22	29.88	30.00	+ .05	60.2	— 1.5	88	25	66	51	8	54	30	53	84	0.02	— 0.2	1	6,638	w.	30	w.	7	11	16	3	4.4	64.6	1889	58.3	*
Point Reyes Light	.....	....	.....	.....	.....	55.6	.....	74	25	60	48	*	51	22	.....	.....	0.68	.....	16	.....	nw.	....	.....	...	1	14	15	....	....	....	.....	....
S. Pac. Coast Region.						66.8	— 2.2										T.	— 0.1													
Fresno	338	6	29.56	29.91	.....	73.6	.....	104	8	90	52	2	57	40	45	44	T.	.....	0	4,550	nw.	18	nw.	22	28	2	0	0.8	80.7	1888	73.6	1892
Los Angeles	330	16	29.60	29.95	+ .04	67.8	— 1.9	95	24	80	50	19	55	36	55	79	0.00	— 0.1	0	2,193	w.	14	w.	7	20	10	0	2.1	73.8	1888	64.5	1880
San Diego	93	21	29.86	29.96	+ .04	65.4	— 2.4	80	25	72	54	18	59	19	59	81	T.	— 0.1	0	3,480	nw.	18	nw.	17	20	8	2	3.0	70.2	*	63.1	1880

NOTE.—The data at stations having no departures are not used in computing the district averages. Letters of the alphabet denote number of days missing from the record. *Two or more directions, dates, or years. †Received too late to be considered in departures, etc. ‡All barometer, temperature, and precipitation normals, and extremes of temperature are obtained from Fort Assinaboine records.

Form Map C—1901.

Chart I. Tracks of areas o

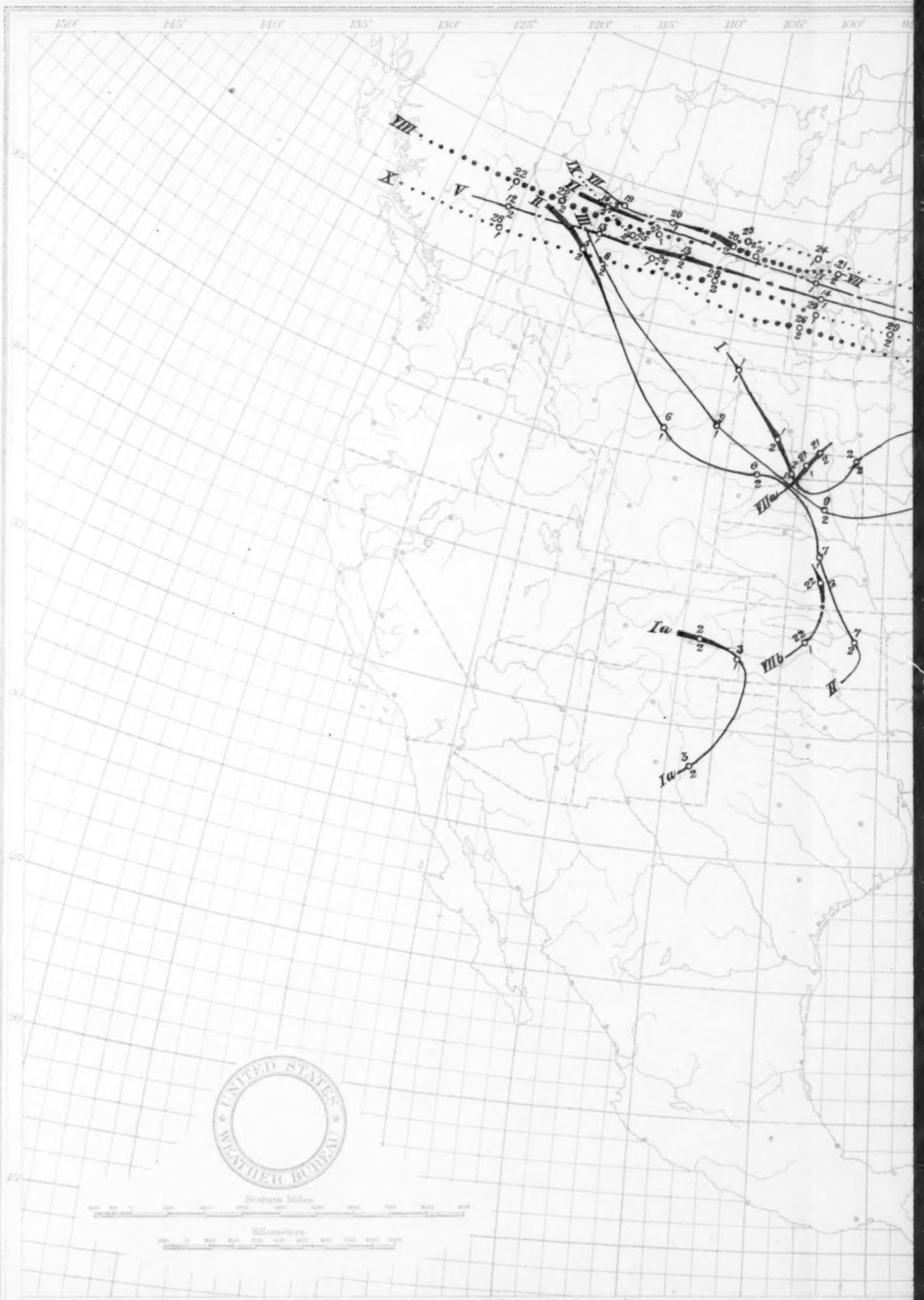
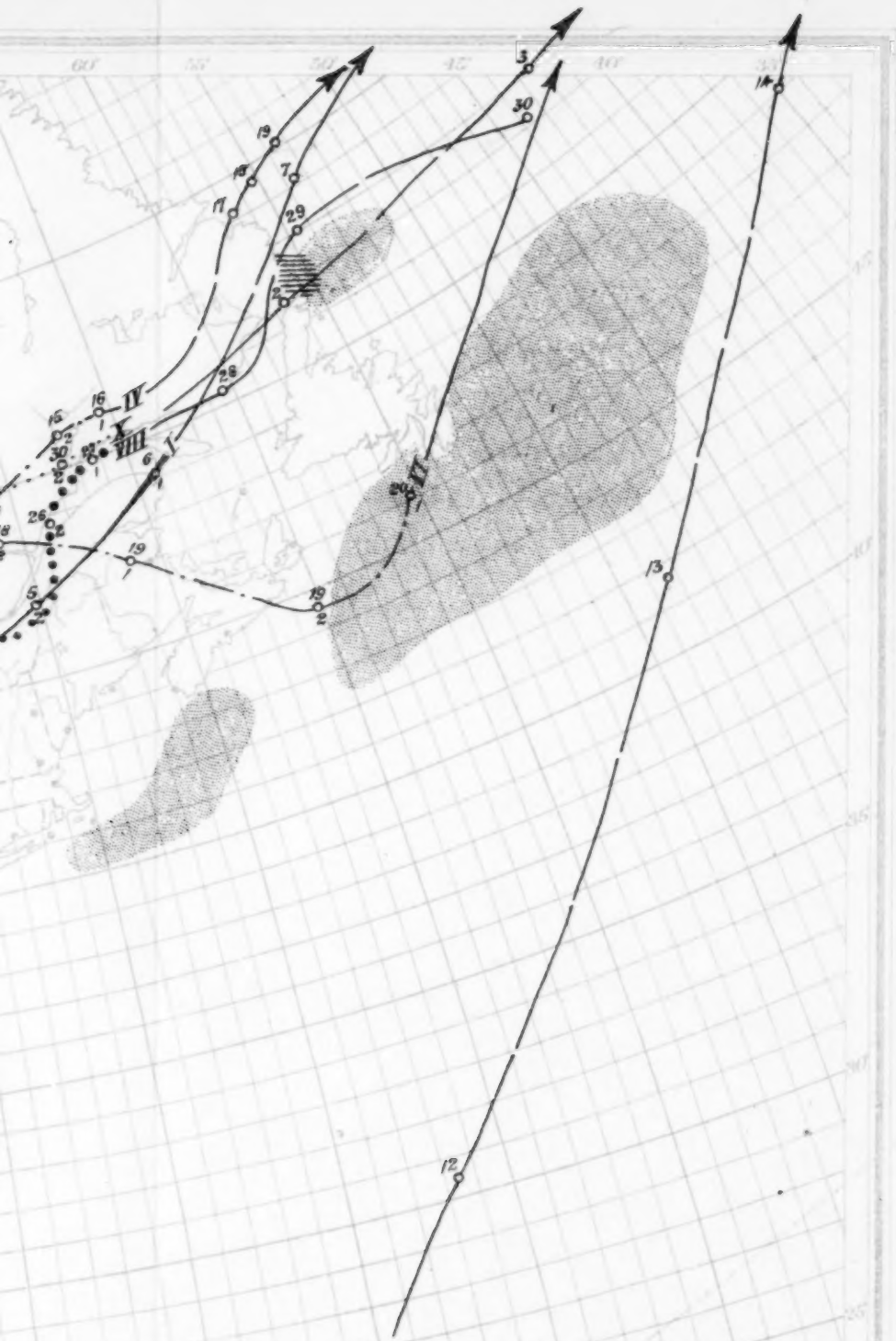


Chart I. Tracks of areas of Low Pressure. September, 1892.



NOTES.

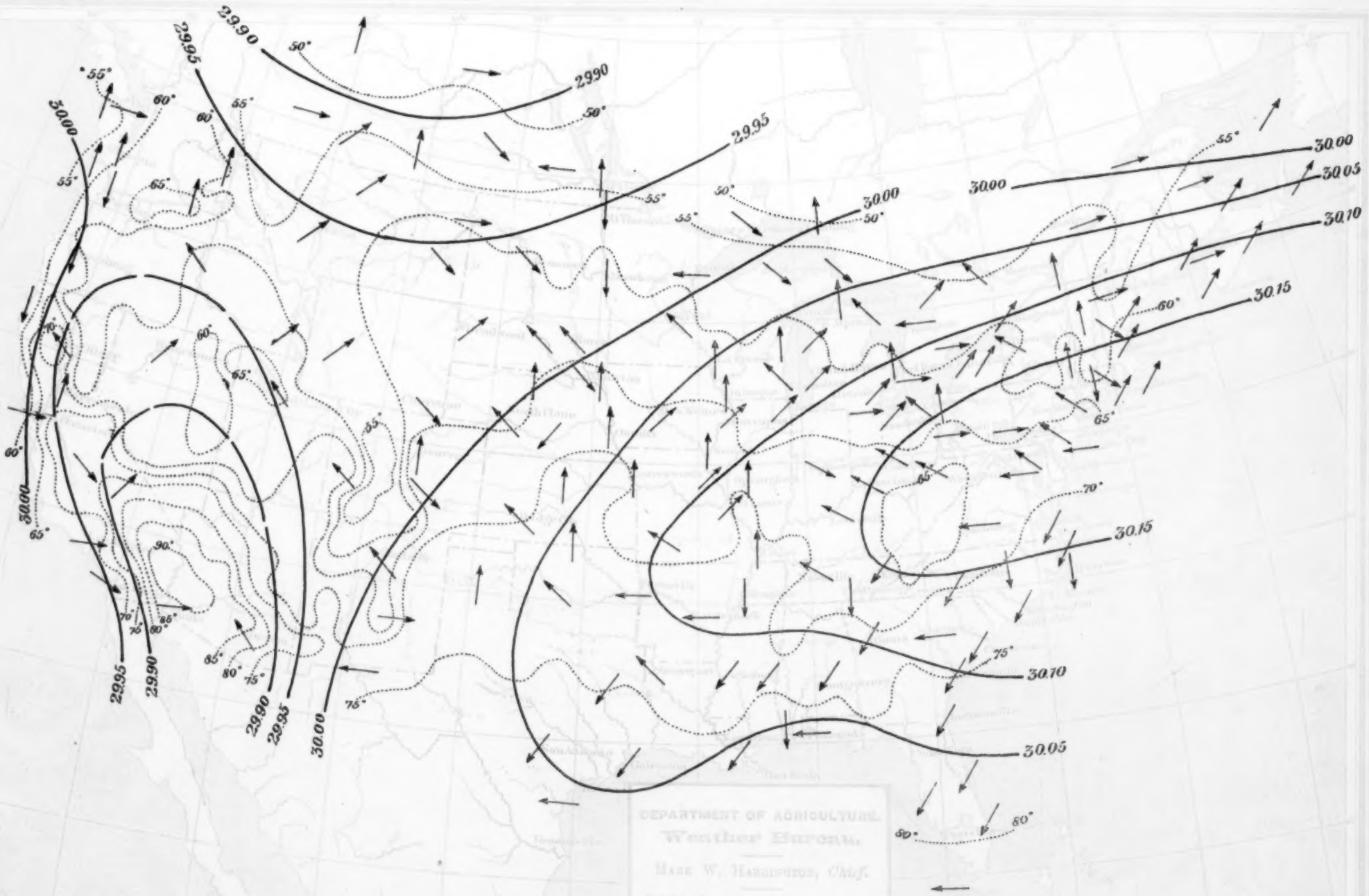
——— Tracks of first decade of month.
— · — · — Tracks of second decade of month.
..... Tracks from 21st to 30th, inclusive.

The Roman letters show number and order of areas of low pressure. The figures above the lines show the days of the month, those below (1 and 2) indicate, respectively, the 8 a. m. and 8 p. m., 75th meridian time, observations. The heavy portion of tracks indicates where the greatest storm energy was displayed.

The dotted shading ( ) indicates fog belts.

The ruled shading ( ) indicates the position in which field-ice or icebergs were observed.

Chart II. Isobars, Isotherms, and Winds. September, 1892.



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Weather Bureau.
MARK W. HARRINGTON, Chief.
Published by authority of the Secretary of Agriculture.
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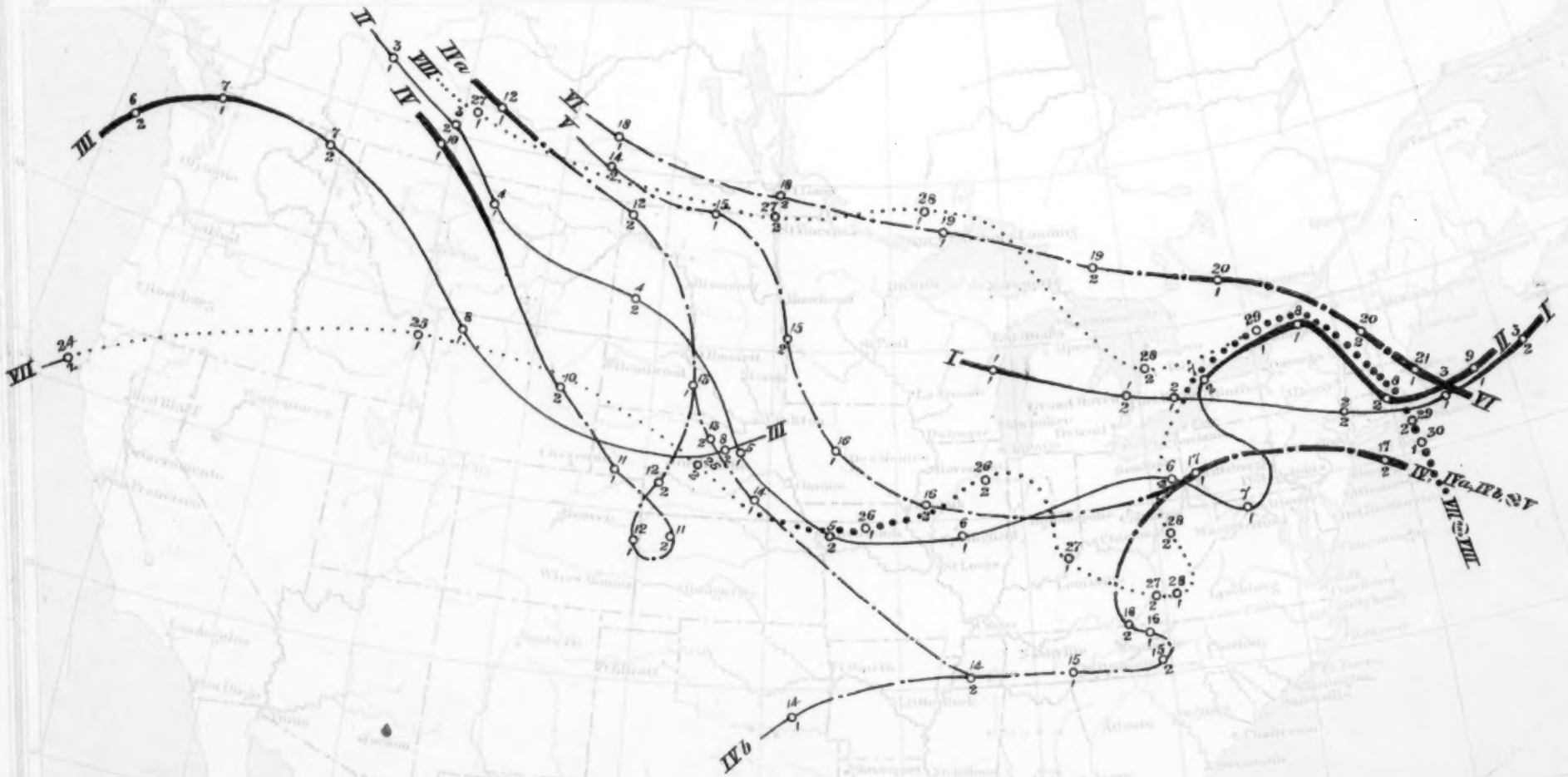
Chart III. Precipitation. September. 1892.

Chart III. Precipitation. September, 1892.

Chart IV. Tracks of areas of High Pressure. September, 1892.



NOTES.

——— Tracks of first decade of month.
— · — · — Tracks of second decade of month.
..... Tracks from 21st to 30th, inclusive.
The heavy portion of tracks indicates where the highest pressure was observed.

DEPARTMENT OF AGRICULTURE.
Weather Bureau.
Mark W. Harrington, Chief.
Published by authority of the Secretary of Agriculture.
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Uniontown Ala
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Valley Head Ala
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H S Tibbey
Coal Harbor
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Dr Bluett
Metlakahtla Alaska
(via San Francisco Cal)

Arizona.

Mrs J H Hamilton
Antelope Valley
(Via Stanton) Ariz
Cortez Cox
(Ariz Canal Co's dam)
Phœnix Ariz
Rev J G Pritchard
Bisbee Ariz
E K Sykes
Calabasas Ariz
D D Ross (Chiracahua Mt)
Tombstone Ariz
Ed Vanderlip
Crittenden Ariz
Chas Noble
Dos Cabezos Ariz
W A Fiege
Dragoon Ariz
George F Cook
Dudleyville Ariz
Dr R B Tripp
(Eagle Pass)
Fort Thomas Ariz
Richard H Farley
(Farley's Camp)
Tip Top Ariz
A T Colton
Florence Ariz
Post Surgeon
Fort Apache Ariz
Post Surgeon
Fort Bowie Ariz
Post Surgeon
Fort Grant Ariz
Post Surgeon
Fort Huachuca Ariz
Dr M M Crocker
(Fort Mohave)
Mohave City Ariz
D Murphy
Gila Bend Ariz
D Rope
Holbrook Ariz
J W Stump (Mt Huachuca)
Tombstone Ariz
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Holbrook Ariz
Frank Alkire
(New River)
Phœnix Ariz
W N Cummings
Nogales Ariz
Mrs E S Dodge
Oracle Ariz
George W Wells
(Oro) Clifton Ariz
G W Bonacker
Payson Ariz
Maj T W Hine
Phœnix Ariz
Bruce Perley
Phœnix Ariz
Catharine E Langhorne
Red Rock Ariz
W W Strohn
Reymert Ariz
Post Surgeon
San Carlos Ariz
John McNeil
Show Low Ariz
H Koshland
Signal Ariz
Walter G Scott
St Johns Ariz
D D Gowan
care F H Nash
Strawberry Ariz
Miss Mary Tevis
Teviston Ariz
E L Wetmore
Tucson Ariz
J C Hayden
Tucson Ariz
T B Carter
Walnut Grove Ariz
F W Heyne (Walnut Ranch)
Rucker Ariz
Post Surgeon
Whipple Barracks
Prescott Ariz
T D Bridger
(Wood Cañon)
San Simon Ariz
C P Smith
Wilgus Ariz
Agent A & P R R
Winslow Ariz
G B Gardiner
Woodruff Ariz

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Bee Branch Ark
T J Warner
Black Rock Ark
A L Morgan
Camden Ark
A P Robinson
Conway Ark
D H Hopkins
Dallas Ark
Dr W B Johnson
El Dorado Ark
Prof G L Teller
Fayetteville Ark
U G McLinden
Gaines Landing Ark
A C Hull
Harrison Ark
J M Kinser
Hope Ark
Post Surgeon U S A
Hot Springs Ark
Silas C Turnbo
(Keesees Ferry Ark)
Protem Mo
Mrs Isabella M Perrin
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M F Locke
Com of Agriculture
Little Rock Ark
F H Clark
Little Rock Ark
W H Pyburn
Lonoke Ark
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Madding Ark
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Melbourne Ark
Capt Joseph Evins
Mount Nebo Ark
J W Walker
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Alex Goodrich
Osceola Ark
E Hail
Ozark Ark
Peter Hamilton
Rogers Ark
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Stuttgart Ark
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Washington Ark
A H Corrigan
Washington Ark
Dr A Dunlap
Winslow Ark

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Agnew Cal
Dr A Fouch
Alvarado Cal
Miss Winifred S Fry
Arcata Cal
Riverside Trust Co Ltd
Arlington Heights
Riverside Cal
Charles L Fox
(Arlington Heights)
Riverside Cal
W A Webster
Bakersfield Cal
Prof F Soule
Berkeley Cal
Wm Barry (Centreville)
Niles Cal
Pomona College
Claremont Cal
D S Sartwell
Crescent City Cal
W W Bliss
Duarte Cal
E S Barney
Drytown Cal
A C Hillman
Davisville Cal
S Holland
Evergreen Cal
Mrs W H Robinson
Florin Cal
J H Sturges
Folsom City Cal
D W Johnson
Forestville Cal
Post Surgeon
Fort Bidwell Cal
C M Fitzgerald
Georgetown Cal
B F Berriman
Grass Valley Cal
W J Loutzenheiser
Grass Valley Cal
J F Beale
Independence Cal
C W Craig
Independence Cal
C F Macey
(Iowa Hill)
Iowa City Cal
Richard Webb
Jackson Cal
Prof J W McLain
Julian Cal
J F Parks
(Kennedy Gold Mine)
Jackson Cal
Joseph Dominici
La Grange Cal
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San Jose Cal
Ezra Fiske
Lodi Cal
W H B Trautham
Los Gatos Cal
J H Southwick
Milton Cal
Wm H Martin
Napa Cal
H P Aldrich
Needles Cal
L D Palmer
Needles Cal
Sherman W Marsh
Nevada City Cal
C H Kellogg
Newcastle Cal
B F Spencer
Nordhoff Cal
Edw Llewelyn
Oakdale Cal
Director Chabot Obs'y
Oakland Cal
Isaac Cooper
Oleta Cal
W H Edwards
(Orangevale)
Folsom City Cal
G W Smith
Palermo Cal
H S Channing
Pasadena Cal
G W Barlow
Placerville Cal
A G Platt
Pleasanton Cal
L F Bassett
Redding Cal
C M Hammond
(Red Hill Ranch)
Upper Lake Cal
S H Gerrish 1517 G street
Sacramento Cal
J A Barwick
Sacramento Cal
Dr E K Abbott
Salinas Cal
Michael Gorman
San Ardo Cal
Dr A K Johnson
San Bernardino Cal
Dr L Gregory
San Jacinto Cal
Dr A C Simonton
San Jose Cal
Hugh D Vail
Santa Barbara Cal
A Block
Santa Clara Cal
W R Springer
Santa Cruz Cal
L E Blochman
Santa Maria Cal
E S Tomblin
(Shasta Springs) Mott Cal
T G Brown
Stockton Cal
T B Sanders
Susanville Cal
E C Vorheis
Sutter Creek Cal
J E Boal
(Sweetwater Dam)
National City Cal
Austin Young
(Tehachapi)
Greenwich Cal
P R McCabe
Turlock Cal
W H Roscoe
Upper Mattole Cal
G O Coburn
Vacaville Cal
Arthur L Webb
Ventura Cal
I Titcomb
(Walla Walla Creek)
Fort Jones Cal
A L Bancroft
Walnut Creek Cal
A S Noyes
West Butte Cal
Wm Lumbard
Wheatland Cal
J M Case
Winchester Cal
A W Sehorn
Willow Cal
F L Clarke
Yountville Cal
H B Ream
Yreka Cal
Sutter County Farmer
Yuba City Cal

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Abbott Colo
W H Powless
Alma Colo
T F Burke
Arboles Colo
Amos Binford
(Avoca) Yuma Colo
L A Rawlings
Box Elder Colo
Dr B A Arbogast
Breckenridge Colo
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Brush Colo
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Carson Colo
Hugh Taylor
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Collbran Colo
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Cope Colo
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Delta Colo
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Loveland Colo
S J Perry
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W H Clark
Meeker Colo
E F Kerr
(Middle Box Elder)
Fort Collins Colo
W M Stewart
Minneapolis Colo
C S Aldrich
Monte Vista Colo
A E Sprague
Moraine Colo
Miss Emma Putnam
Orchard Colo
J M Wadsworth
Pagoda Colo
Samuel Wade
Paonia Colo
P K Barthel
Parachute Colo
H W Goodrich
Red Cliff Colo
Dr G D Yokum
Rico Colo
J W Zepp
Robb Colo
F A Huntley B S A
Rocky Ford Colo
C T Woods
Saint Cloud Colo
G C Smith
Sanborn Colo
E C van Diest
San Luis Colo
E J Capps
Scissors Colo
J R C Husted
Seibert Colo
J D Lucas
Sedgwick Colo
O A Rusk
Sheridan Lake Colo
F M Friend
Springfield Colo
Geo Polhill
Stamford Colo
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(Surface Creek)
Delta Colo
G F Breninger
Table Rock Colo
W P Quaintance
Twin Lakes Colo
P Blumer
(Thon) Elizabeth Colo
J R Pickett (T S Ranch)
Whitewater Colo
P G Bonewitz
Vilas Colo
W J King
Villa Grove Colo
A Wallet
Wallet Colo
T E Gibbons
Watervale Colo
R Z Mason
Ward District Colo
S G Green
Wilde Colo
A N Turney
Yuma Colo
F W Rausch
Zuck Colo

Connecticut.

H R Stevens
(Birmingham)
Stevenson Conn

G J Case
Canton Conn
S P Willard
Colchester Conn
M H Dean
Falls Village Conn
New London Water Works
(Lake Konomowoc)
New London Conn
Rev S Hart
Hartford Conn
J H Tucker
Lebanon Conn
Charles W Hubbard
Middletown Conn
R R Smith
New Hartford Conn
Rev Wm Goodwin
New Hartford Conn
C H Lathrop
North Franklin Conn
C H Truesdale
North Grosvenor Dale Conn
L H Healy
North Woodstock Conn
G C Comstock
Norwalk Conn
K B Loomis
South Manchester Conn
Storrs School Exp Sta
Storrs Conn
Miss E D Larned
Thompson Conn
Rev E Dewhurst
Voluntown Conn
Mrs B F Harrison
Wallingford Conn
N J Welton
Waterbury Conn
S T Stockwell
West Simsbury Conn

District of Columbia

M F Burrows
cor 30th and M sts nw
Washington D C
Officer in Charge
Washington Aqueduct
Washington D C

Delaware.

John S Jester
Dover Del
Wm C L Carnagy
Kirkwood Del
H L Wallace
Seaford Del

Florida.

J Buzzell
(Amelia)
Fernandina Fla
A F Wyman
Archer Fla
I B McDonald
Avon Park Fla
John D McAliley
Bristol Fla
Fred L Robertson
Brooksville Fla
Dr J B Rosenberg
Cleremont Fla
H W O Margary
Eustis Fla
Chas Ingall
Federal Point Fla
A H Adams
Fort Meade Fla
John B Escott
Grasmere Fla
Thos Roberts
Green Cove Springs Fla
J S Wade
Homeland Fla
H D Pierce
Hypoluxo Fla
E R Demain
Jacksonville Fla
W L Van Duzor
Kissimmee Fla

C V S Wilson
Manatee Fla
Rev J H White
(Merritts Id) Georgiana Fla
Wm Bahrt
(Mullett Key)
Port Tampa Fla
Miss M M Gardner
Myers Fla
W L Jewett
Ocala Fla
Dr Geo E Walton
Orange City Fla
J M Rice
Orlando Fla
W J Borden
Oxford Fla
Wiley Stinson
Plant City Fla
J H Hamilton
St Andrews Bay Fla
Post Surgeon
(St Francis Barracks)
St Augustine Fla
Theodore G Maltby
St Petersburgh Fla
Rev W H Carter
Tallahassee Fla
C D Webster
Tarpon Springs Fla

Georgia

Dr J P Bowdoin
Adairsville Ga
Prof L H Charbonnier
Athens Ga
Park Morrill
Atlanta Ga
B D Brantley
Blackshear Ga
J Y Walker
Blairsville Ga
Prof D M Wade
Blakely Ga
Prof B P Gaillard
Dahlonega Ga
R W Cornell
Darien Ga
Wm Kimzey
(Diamond)
Roy Ga
Dr J T Chappell
Dublin Ga
Jno Axtell
Fleming Ga
Renfroe McDonald & Co
Folkston Ga
T G Scott
Forsyth Ga
C W Meaders
Gillsville Ga
T J Holden
Hawkinsville Ga
R L Rhodes
Hephzibah Ga
R M Crum
Homerville Ga
N C Napier
La Fayette Ga
Dr H H Cary
La Grange Ga
Prof P Zellars
Lincolnton Ga
J E Howland
Lithia Springs Ga
G W Warren
Louisville Ga
A W Latimer
Lumpkin Ga
G S Owen
Marietta Ga
J W Frederick
Marshallville Ga
Hon A G McArthur
McArthur Ga
S A Cook
Milledgeville Ga

J J Beck
Morgan Ga
J L Cutler
Piscola Ga
C M Witcher
Point Peter Ga
J F Wilson
Poulan Ga
W M Towers
Rome Ga
C E Lee
Statesborough Ga

Idaho.

Frank Campbell
American Falls Idaho
Mrs Sarah Burnside
Beaver Idaho
Post Surgeon
Boise Barracks
Boise City Idaho
Post Surgeon Fort Sherman
Sherman Idaho
A H Soward
Garden Valley Idaho
D McLoughlin
Kootenai Idaho
J Sherwood
(Henry's Lake)
Lake Idaho
J W Cowden
Martin Idaho
J L Brown
Moscow Idaho
Dr F B Delano
Payette Idaho
Ferdinand Alers
Ruthburg Idaho

Illinois.

J W C Gray
Atwood Ill
Dr M M Robbins
Aurora Ill
W Holden
Aurora Ill
Prof M J Elrod
Bloomington Ill
Dan E Zook
Bushnell Ill
W P Halliday
(Pres't City Nat'l Bank)
Cairo Ill
Public Library
Cairo Ill
R O Purviance
Carlinville Ill
J B Dazey
Charleston Ill
Dr J L R Wadsworth
Collinsville Ill
G W Bright
Decatur Ill
Prof A O Clark
Dixon Ill
C L Farrington
East Peoria Ill
E B Schooley
Effingham Ill
C A Shinkle
Ellsworth Ill
J M Stine
Fairmount Ill
Post Surgeon
Fort Sheridan Ill
Prof M S Oudyn
Greenville Ill
Shirley E Gray
Griggsville Ill
J M Ruggles
Havana Ill
A T Purviance
Hennepin Ill
Wm Rogan
(Irishtown) Carlyle Ill
W J S Cathcart
(Jordans Grove) Sparta Ill
Geo McVicker
Kankakee Ill

Frank E Sanford
La Grange Ill
B A Jenkins
Louisville Ill
Dr S M Pegram
Manchester Ill
J B Sheapley
Martinsville Ill
Dr G Leibrock
Mascoutah Ill
J Withington
Mattoon Ill
W P Gibbs
McLeansborough Ill
E E Thornton
Muddy Valley Ill
C W Adams
New Haven Ill
C H Fahs
Olney Ill
V E Phillips
Olney Ill
J S Seeley
Oswego Ill
Dr J O Harris
Ottawa Ill
J E Templeton
(Palestine)
Rich Woods Ill
J K Eberle
Pana Ill
H G Russell
Paris Ill
Dr F Brendel
Peoria Ill
H A Burr
Philo Ill
J W James (Riley)
Marengo Ill
Henry B Clark
Rantoul Ill
T D Robertson
Rockford Ill
N T Veatch
Rushville Ill
Godfrey Knetzger
Saint John Ill
John Craig
Springfield Ill
R Dow
Sycamore Ill
O C Nussle
Walnut Ill
O A Watson
Watseka Ill
P J Bates
White Hall Ill
F Osborne
Winnebago Ill

Indiana.

L Stealy
Angola Ind
J T Moss
Ashboro Ind
C F Hole
Butlerville Ind
Rev E J Spelman
Cambridge City Ind
Dr N I Kithcart
Columbia City Ind
J A Perry
Columbus Ind
H Hessler
Connersville Ind
J P White
De Gonia Springs Ind
Higginbotham & Son
Delphi Ind
W J Davidson
Farmland Ind
C W Whitney
Hammond Ind
J N Latta
Hawpatch Ind
C R Kluger
Huntingburg Ind
C F R Wappenhans
Indianapolis Ind
Sylvester Johnson
Irvington Ind
J C Loomis
Jeffersonville Ind
Prof H A Huston
La Fayette Ind
D E Pryor
Logansport Ind
Prof J L Massena
Marion Ind
E Kirkwood
Mauzy Ind
J C Black
Michigan City Ind
J M Lockwood
Mount Vernon Ind
Stephen & Durham
Muncie Ind
Jonathan Beard
New Albany Ind
J F Hood
Point Isabel Ind
E Jones
Princeton Ind
Dr W N Wirt
Rockville Ind
J A Forsythe
Seymour Ind
Prof C G Boerner
Vevay Ind
Dr T C Hunter
Wabash Ind
Dr W B Squire
Worthington Ind

Indian Territory.

Post Surgeon
Fort Supply Ind T
J E Wolfe
Gwenndale Ind T
C H Heald
Healdton Ind T
J A Wilburn
Lehigh Ind T
Fred Q Waite
Pauls Valley Ind T
Ignatus Spitzer
Purcell Ind T
John W Elswick
Sapulpa Ind T
Wm Noble
South McAlester Ind T

Iowa.

James Barr
Algona Iowa
David E Hadden
Alta Iowa
Conrad Schadt
Amana Iowa
Iowa Agricultural College
Ames Iowa
Iowa Exp Station
Ames Iowa
J W Love
Atlantic Iowa
H N Renfrew
Bancroft Iowa
H W Van Dike
Belle Plaine Iowa
James Rodgers
Blakeville Iowa
Prof C W Thompson
Blockton Iowa
Hon B R Vale
Bonaparte Iowa
Moses Simon
Carroll Iowa
Prof A C Page
Cedar Falls Iowa
H D Olds
Cedar Rapids Iowa
J I Ong
Centerville Iowa
Dr J W Smith
Charles City Iowa
A S Van Sandt
Clarinda Iowa
Luke Roberts
Clinton Iowa
A A Berry
College Springs Iowa
J W Bixby Corning Iowa
J S Whitaker
Corydon Iowa
Gregory Marshall
Cresco Iowa
Leonard Standring
Decorah Iowa
Wm Ball
Delaware Iowa
Ph A Schlumberger
Denison Iowa
George M Chappell
Des Moines Iowa
C A Schaffter
Eagle Grove Iowa
G A Fairfield
Elkader Iowa
D B Nims
Emerson Iowa
H Conroy
Emmetsburg Iowa
Dr J Fred Clark
Fairfield Iowa
R Z Latimer
Fayette Iowa
Miss L A McCready
Fort Madison Iowa
Seth Dean
Glenwood Iowa
F L Williams
(Grand Meadow)
Postville Iowa
J G Culver
Greenfield Iowa
Prof S J Buck
Grinnell Iowa
Chas G Rogers
Grundy Centre Iowa
E C Grenelle
Hampton Iowa
J W Bopp
Hawkeye Iowa
M T Ashley
Hopeville Iowa
Theodore Marks
Hopkinton Iowa
Emil F Wulfke
Independence Iowa
Prof J L Tilton
Indianola Iowa
Albert L Arner
Iowa City Iowa
J B Parmalee
Iowa Falls Iowa
Prof John H Landes
Keosauqua Iowa
H B Strever
Larrabee Iowa
Mrs M B Stern
Logan Iowa
Dr A B Bowen
Maquoketa Iowa
L S Kilborn
Marshalltown Iowa
Carl Smith
Mason City Iowa
Gust Johnson
(Maxon) Albia Iowa
Rev Jos W Hubbard
Mechanicsville Iowa
E C Holland
Milton Iowa
H D Smith
Monticello Iowa
F G Thomas
Mooar Iowa
Hon Wm Shriver
Mt Ayr Iowa
Dr Max E Witte
Mt Pleasant Iowa
A W Lewis
Murray Iowa
G D Pattingill
Osage Iowa
Jos Boyd
Oskaloosa Iowa
Wm J Wicks
Panama Iowa
W A Shaffer
Richland Iowa
L J Norton
Rock Rapids Iowa
Dr Caleb Brown
Sac City Iowa
Hon L W Lewis
Seymour Iowa
G V Swearington
Sidney Iowa
R B Young
Spirit Lake Iowa
A J Bond
Storm Lake Iowa
J M Rider
Tipton Iowa
T F McCune
Vinton Iowa
W A Cook
Washington Iowa
C M Trumbauer
Webster City Iowa
Merton L Fuller
Williams Iowa
Will McKnight
Winterset Iowa

Kansas.

W P Gulick
Abilene Kans
J J Cass
Allison Kans
Wm Cheetham
Altoona Kans
C H Rhodes
Arkalon Kans
Prof E B Knerr
Atchison Kans
A J Deihl
Belleville Kans
C S Culver
Bucklin Kans
L C Wilson
Buffalo Park Kans
H E Faidley
Burr Oak Kans
A G Alrich
Cawker City Kans
Chas Burchow
Colby Kans
J M Lobaugh
Coldwater Kans
O E Skinner
Columbus Kans
Agent U P R R
Collyer Kans
E Shaw
Cunningham Kans
J B Handy
Downs Kans
C W Gilman
Elco Kans
Dr A C Williams
Elk Falls Kans
Agent U P R R
Ellis Kans
Prof T H Dinsmore Jr
Emporia Kans
C D Perry
Englewood Kans
Ben C Rich
Eureka Ranch
Ellis Kans
Post Surgeon
Fort Riley Kans
W W Dillard
Fort Scott Kans
Chas M Bell
Gibson Kans
Jesse Royer
Gove Kans
Agent U P R R
Grainfield Kans
M H Kenaga
Greensburgh Kans
R M Lawyer
Grenola Kans
Agent U P R R
Grinnell Kans
L W Dennen
Havensville Kans
Geo P Griffith
Hays City Kans
D C Ruth
Hesston Kans
W S Belden
Horton Kans
C Bishir
Hutchinson Kans
J M Altaffer
Independence Kans
Dr E R Heath
1115 Garfield Ave
Kansas City Kans
Jacob Nixon
Kellogg Kans
Wm F Smith
Kiowa Kans
Dr W M Goodwin
La Crosse Kans
F R French
Lakin Kans
Prof F H Snow
Lawrence Kans
C B Jennings
Lebo Kans
C E Poling
Macksville Kans
Agent U P R R
McAllaster Kans
Ed F Haberlein
McPherson Kans
C P Blachly
Manhattan Kans
Prof E R Nichols
Agricultural College
Manhattan Kans
E H Kern
Mankato Kans
Leon Riddle
Marion Kans
A C Abbott
(Marmaton)
Fort Scott Kans
C I Hinman
Medicine Lodge Kans
J L Steel
Minneapolis Kans
A Bahl
Monument Kans
C H Foltz
Moreland Kans
R P Edgington
Morse Kans
John A Gordon
Morton Kans
H C Williams
New England Ranch
Grainfield Kans
C M Kauffman
Oakley Kans
Agent U P R R
Ogallah Kans
D Doyle
Oswego Kans
Agent U P R R
Page Kans
W T Jackson
(Pauline) P O Box 247
Topeka Kans
F T M Dutcher
Phillipsburgh Kans
Agent U P R R
Plainville Kans
N A Andress
Pleasant Dale Kans

Agent U P R R
Quinter Kans
D M Adams
Rome Kans
A P Collins
Salina Kans
J W Goodell
Sedan Kans
Agent U P R R
Sharon Springs Kans
Dr S S Kaysbier
Seneca Kans
W H Harvey
Shields Kans
A A Denton
Sterling Kans
Prof J T Lovewell
Topeka Kans
T B Jennings
Topeka Kans
Washburn College
Topeka Kans
J W Tipton
Toronto Kans
C E Wightman
Tribune Kans
T W Marshall
Ulysses Kans
Agent U P R R
Wa Keeney Kans
W P Cochran
Wakefield Kans
Agent U P R R
Wallace Kans
Agent U P R R
Weskan Kans
Agent U P R R
Winona Kans

Kentucky.

M H Crump
Bowling Green Ky
J P Frank
Burksville Ky
H B Bomar
Caddo Ky
C H Major
Canton Ky
C E Jones
Catlettsburgh Ky
W E Fowler
Central City Ky
J W Kirby
Carrollton Ky
J C Notte
Cloverport Ky
J B Atkinson
Earlington Ky
Miss Lee Ray
Edmonton Ky
L C Alcorn
Greensburgh Ky
T W MacGill
Franklin Ky
George O Bryan
Georgetown Ky
Robert J Devenish
Grand Rivers Ky
Dr F L Harrod
Harrodsburgh Ky
Bassett & Co
Hopkinsville Ky
J J Roberts
La Grange Ky
J G Sweeney
Lancaster Ky
Chas F See
Louisa Ky
Frank Burke
Louisville Ky
C A Matlock
Matlock Ky
A H Martine
Middlesborough Ky
James O'Connell
Mount Sterling Ky
J P Rowlette
Munfordville Ky
Wm Borneman
Paducah Ky
Oscar Haynes
Pellville Ky
J S Bingham
Princeton Ky
R E Roberts
Richmond Ky
A Brooks Robard Ky
T J Ryland
Russellville Ky
A K Denny
Shelby City Ky
H W Preissler
Shelbyville Ky
A B Gilbert
South Fork Ky
Rev Miles Saunders
Springfield Ky
J O Strouse
Versailles Ky
W G Shivell
Wickliffe Ky
F A Gurney
Williamsburg Ky

Louisiana.

Dr C J Edwards
Abbeville La
Miss Grace E Manard
Amite City La
Prof W C Stubbs
Sugar Ex Station
(Audubon Park)
New Orleans La
Prof H A Morgan
Baton Rouge La
Dr L D Chauff
Bonnet Carre La
Hon S P Henry
Cameron La
J A White Jr
Clinton La
Dr W V Taylor
Davis La
W D Park
Donaldsonville La
Wm P Chandler
Farmerville La
Rev Joseph A Raby S J
Grand Coteau La
G S White
Hammond La
D W Harris
Homer La
A F Chanfrau
Houma La
G W Whitworth
Jeanerette La
Dr Wm Meyer
Lake Charles La
A Werner
Lawrence La
Dr E A Crawford
Liberty Hill La
M R Bein
Luling La
Hon L Molenar
Marksville La
R Benefield
Maurepas La
L J Dodge
Melville La
Mrs J A Gebert
New Iberia La
R E Kerkam
New Orleans La
Maurice Bird
North Louisiana Exp Sta'n
Ouachita La
Hon J E Le Blanc
Paincourtville La
Prof J E Johnston
Plain Dealing La
P G Kleinpeter
Plaquemine La
Wm A Reed
Roseland La.
E Dechamps Jr
Shell Beach La
Maj S T Grisamore
Thibodeaux La
T A Williams
(West End) New Orleans La
Geo H Tassin
Wallace La
Dr W M Guice
Winnsborough La

Maine.

Jos Wood
Bar Harbor Me
L H Murch
Belfast Me
C C Lovejoy
Bethel Me
Dr D E Seymour
Calais Me
Silas West
Cornish Me
Frank W Kingsley
East Machias Me
H M Mansfield
Fairfield Me
J M S Hunter
Farmington Me
Geo Ingraham
Houlton Me
Post Surgeon
Kennebec Arsenal
Augusta Me
Prof S N Taylor
Kents Hill Me
Union Water Power Co
Lewiston Me
V P Hall
Mayfield Me
G L Upton
Millbridge Me
Prof M C Fernald
Orono Me
Dr W L Jackson
Sorrento Me
C Hopkins
West Jonesport Me

Maryland.

C P Cronk
Baltimore Md
A E Acworth
Barren Creek Springs Md
F F Brown
(Bœtcherville)
Cumberland Md
E T Shriver
Cumberland Md
H Shriver
Cumberland Md
A F Galbreath
Darlington Md
S P Minnich
Easton Md
Chas Feldman
Edgemont Md
Prof G G Curtis
Fallston Md
G Earnest Bantz
Frederick Md
Jos Plummer
Jewell Md
Geo W Joy
Leonardtown Md
McDonogh Institute
McDonogh Md
Dr Howard H Hopkins
New Market Md
Mt St Mary College
Mt St Marys Md
Dr W H Marsh
Solomons Md
Dr C W Weaver
Taneytown Md
Woodstock College
Woodstock Md

Massachusetts.

F R Harrington
Adams Mass
F W Green
Adams Mass
Miss S C Snell
Amherst Mass
Hatch Experiment Station
Amherst Mass
Ag'l Experiment Station
Amherst Mass
A B Wiggin
Andover Mass
F K Lathrop
Beverly Farm Mass
Prof A L Rotch (Blue Hill)
Readville Mass
Prof W H Niles
Boston Mass
Desmond Fitz Gerald
Brookline Mass
Harvard College Observat'y
Cambridge Mass
E C Brooks (Cambridge)
Mt Auburn Mass
Prof W M Davis
Cambridge Mass
J Warren Smith
Cambridge Mass
F H Norton
Chicopee Mass
G W Weeks
Clinton Mass
M H Houghton
Concord Mass
F A Tower
Concord Mass
Gen J H Reid
Cotuit Mass
Conant Observatory
Dudley Mass
Geo L Lyon
(Egg Rock)
Nahant Mass
C V S Remington
Fall River Mass
O B Truesdell
Fiskdale Mass
Dr J Fisher
Fitchburg Mass
Dr A P Mason
Fitchburg Mass
J E Baker
Florida Mass
Boston Water Works
Framingham Mass
Dr W E Brown
Gilbertville Mass
C Woolley
Groton Mass
B B Cutler
Heath Mass
C F Sleeper
Hyannis Mass
Essex Company
Lawrence Mass
Leicester Academy
Leicester Mass
W B Hosmer
Leominster Mass
Prop Locks & Canals
Lowell Mass
F E Saunders
Lowell Mass
M W Graves
Ludlow Mass
J W Darcey
Lynn Mass
J C Haskell
Lynn Mass
W C Winter
Mansfield Mass
R M Gow
Medford Mass
Middleborough Water Wk's
Middleborough Mass
Rev A K Teele
Milton Mass
W H Allen
Monroe Mass
Dr G E Fuller
Monson Mass
Wm Street
(Mount Nonotuck)
Mount Tom Mass
Dr W D Hodges
Nahant Mass
T R Rodman
New Bedford Mass
New Bedford Water Works
New Bedford Mass
F V Pike
Newburyport Mass
Newburyport Water Works
Newburyport Mass
C H Kohlrausch Jr
North Billerica Mass
J M Clark
Northampton Mass
Miss L B Knapp
Plymouth Mass
Mrs E M West
Princeton Mass
J R Smith
Provincetown Mass
Mrs I D Page
Randolph Mass
Miss L W Chase
Royalston Mass
John S Cheever
Roxbury Mass
A A Smith
Salem Mass
Elisha Slade
Somerset Mass
H W Cushing
South Hingham Mass
Post Surgeon
National Armory
Springfield Mass
Dr E U Jones
Taunton Mass
A F Sprague
Taunton Mass
Taunton Water Works
Taunton Mass
C H Wilmarth
Taunton Mass
Turners Falls Co
Turners Falls Mass
Dr S W Abbott
Wakefield Mass
Boston Mf'g Co
Waltham Mass
E P Morton
Webster Mass
Prof Sarah F Whiting
Wellesley Mass
G S Newcomb
Westborough Mass
Williams College Obsy
Williamstown Mass
G W Swan
Worcester Mass
Worcester Academy
Worcester Mass

Michigan.

W H Howard
Adrian Mich
Prof Chas E Barr
Albion Mich
G W Grigsby
Allegan Mich
P M Smith
Alma Mich
Asaph Hall Jr
Ann Arbor Mich
Wm Atkin
(Arbela)
Millington Mich
F N Hilton (Ball Mt)
Pontiac Mich
Mrs Ida McDiarmid
Bear Lake Mich
R O Gould (Berlin)
Smith Mich

C Leavitt
Bellaire Mich
Dr H V Tutton
Benton Harbor Mich
J W Vau Deman
Benzonia Mich
W J Jones
Berrien Springs Mich
D B Alger
Birch Run Mich
S Alexander
Birmingham Mich
A Hardy
Boon Mich
H McNair
Brown City Mich
David Straehly
(Bronson)
Burr Oak Mich
E S Grierson
Calumet Mich
E H Green
Charlevoix Mich
D Woodward
Clinton Mich
A M Shotwell
Concord Mich
C W Brown
Crystal Falls Mich
Edward A Evans
Detroit Mich
Mrs H A Hepburn
Evart Mich
L D Watkins
(Fairview)
Manchester Mich
M Conklin
Fitchburgh Mich
W L Fisher
Flint Mich
C I Rathbun
Fremont Mich
A Wm Brown
Gaylord Mich
Prof F C Smith
Gladwin Mich
Worden Wells
Glenwood Mich
D Fred Sweet
Grand Rapids Mich
J W Morris
Grape Mich
Dr O Palmer
Grayling Mich
L B Smith
Hanover Mich
E S Shaw
Harbor Springs Mich
W E Aldrich
Harrison Mich
Dr D W Mitchell
Harrisville Mich
F H Edwards
Hart Mich
C F Leipprandt
Hayes Mich
A D DeGarmo
Highland Station Mich
E B Rodgers
Hillsdale Mich
F W Munson
Howell Mich
O L Giddings
Ivan Mich
J A Rath
Jackson Mich
W Bice
Jeddo Mich
W A Black
Kalamazoo Mich
A G Smith
Lake City Mich
Dr H B Baker
Sec State Board of Health
Lansing Mich
A Lathrop
Lathrop Mich

H C Bradish (Madison)
Adrian Mich
Jas White (Caldwell)
Manton Mich
Dr G H Green
Marshall Mich
N Cody
Mayville Mich
W S Locke
McMillan Mich
J A Hartzler
Mottville Mich
E B Bushnell
Noble Mich
H Wilson
North Aurelius Mich
P Mayo
(North Marshall)
Battle Creek Mich
W H Faxon
Ovid Mich
Orr D Marks
Paris Mich
L Marvill
Parkville Mich
L R Brown
Rawsonville Mich
Dr W C Gates
Rockland Mich
Rev J Ferries
St Ignace Mich
W E Nims
Sand Beach Mich
Jas J Decker
Standish Mich
C H Force
Stockbridge Mich
Dr J S Caulkins
Thornville Mich
A Smith
Vandalia Mich
M M McCormack
Vienna Mich
V W Eaton
(Washington) Romeo Mich
J J Gilding
Weldon Creek Mich
W H Middagh
White Pigeon Mich
J H Forster
Williamston Mich
J C Bemiss
Ypsilanti Mich

Minnesota.

Rev R B Abbott
Albert Lea Minn
C E Crane
Alma City Minn
A Young
Ash Creek Minn
Warren S Jackson
Bingham Lake Minn
Dr F L Puffer
Bird Island Minn
W D Belden
Caledonia Minn
O A Hallim
Cambridge Minn
Jacob Rouse
Camden Minn
O C Larson
Canton Minn
W V Davee
Clear Lake Minn
John Ross
Crookston Minn
Frank J Thompson
Eagle Bend Minn
F G McColm
Easton Minn
D F Akin
Farmington Minn
F J Kneeland
Fergus Falls Minn
C F Greening
Grand Meadow Minn

John Ellingson
(Leech Lake)
Grand Rapids Minn
B C Finnegan
Grand Rapids Minn
J G C Johnson
Granite Falls Minn
W V King
Jackson Minn
Miss Clarrie Tanner
Kinbrae Minn
Wm Maddy
(Lake Winnibigoshish Dam)
Grand Rapids Minn
A W Sheets
Long Prairie Minn
Geo W Richards
Maple Plain Minn
J H Harmon
Minneapolis Minn
Wm Cheney
Minneapolis Minn
L G Moyer
Montevideo Minn
D T Wheaton
Morris Minn
Carleton College
Northfield Minn
Neil Johnsou
(Pine River)
Brainerd Minn
Irwin R Zimmerman
Princeton Minn
Capt F Wherland
(Rolling Green)
Fairmont Minn
Patrick Henry
(Sandy Lake Dam)
Libby Minn
L Curry
Sheldon Minn
H W Hill
St Charles Minn
Rev O A Norman
St Olaff Minn
J A Peck
Wabasha Minn

Mississippi.

W L McGee
Agricultural College Miss
A G Smith
Booneville Miss
Dr G W Smith-Vaniz
Canton Miss
F B Word
Clarksdale Miss
W T Mathews
Cleveland Miss
D H Miller
Crystal Springs Miss
Lloyd T Binford
Duck Hill Miss
C W Barber
Edwards Miss
James E Mills
Enterprise Miss
I N Bedford
Fayette Miss
E R Somerville
Greenville Miss
Dr Jno Bertrand
Hattiesburgh Miss
L Heyman
Kosciusko Miss
Capt C D Koch (Logtown)
Pearlington Miss
B T Webster
Louisville Miss
P E Blumer
Moss Point Miss
W H Hill
Palo Alto Miss
Dr C W Bolton
Pontotoc Miss
Dan McColl
(Ship Island) Biloxi Miss

Prof R B Fulton
University Miss
Dr A J Sanderson
Vaiden Miss
Prof J Reeves
Washington Miss
A Erickson
Water Valley Miss
W S Davis
Waynesborough Miss

Missouri.

Dr H W Tuttle
Adrian Mo
W D Juvinall
Alton Mo
L T Theilmann
Appleton City Mo
R W Mueller
Augusta Mo
Jasper W Wallace
Ava Mo
Newburn & Co
Bethany Mo
S N Page
Big Piney Mo
J C Duffey
(Botanical Garden)
St Louis Mo
L Benecke
Brunswick Mo
W H Lown
Canton Mo
Pettit & Welch
Carrollton Mo
Z T Russell
Carthage Mo
N J Swetland & Co
Chillicothe Mo
J H Sharp
Clinton Mo
H A McNally
Columbia Mo
Levi Chubbuck
Columbia Mo
R P Russell
Conception Mo
Henry Miller
Concordia Mo
A F McCray
Cowgill Mo
Wick Morgan
Dadeville Mo
W H Broaddus
Darksville Mo
H M Wollard
Dunnegan Mo
David Sharp
East Lynne Mo
J D McFarland
Edina Mo
John S Luthy
Edge Hill Mo
S Newton
Eldon Mo
A Reinisch
Excelsior Springs Mo
Prof T Berry Smith
Fayette Mo
Fred W Duenckel
Forest Park Station
Saint Louis Mo
Wm Muir
Fox Creek Mo
Mary A Snyder
Fulton Mo
Otto Sims
Gainesville Mo
W P Young
Gallatin Mo
H C Crooks
Galt Mo
Geo W Carleton
Gayoso Mo
Jos Milburn
Glensted Mo
J W Pulliam
Gorin Mo

L M Bean
Gordonville Mo
Prof C W Pritchett
Glasgow Mo
Lindon Marts
Grove Dale Mo
A J Sharp
Harrisonville Mo
S M Butterton
Harviell Mo
Dr J I Brady
Hastain Mo
Julia Maushund
Hermann Mo
G A Leavitt
Houston Mo
H C Chiles
Independence Mo
C M Hunt
Irena Mo
W H Delano
Ironton Mo
C B Lane
Jefferson City Mo
F D Chubbuck
Kidder Mo
E H Adams
Lamar Mo
W D Wade
Lamonte Mo
F M Joslyn
Langdon Mo
M W Serl
Lebanon Mo
Chas Tenbuer
Lexington Mo
J R Eaton
Liberty Mo
H H Windes
Linn Creek Mo
Alex Brinkley
Linneus Mo
J W James
Mansfield Mo
E R Graham
Marble Hill Mo
W H Black
Marshall Mo
Marcus W Wood
McCunes Station Mo
Dr. J F Llewellyn
Mexico Mo
J D Sanders
Mine La Motte Mo
J M Hasness
Mound City Mo
E S Allen
Mount Vernon Mo
A H Helmbrecht
New Boston Mo
Andreas Olnhausen
New Hartford Mo
Max Eimbeck
New Haven Mo
A I Zeigel
New Palestine Mo
G E Nichols
Neosho Mo
E E Steines
(Oakfield) Hollow Mo
Henry Bruihl
Oak Ridge Mo
H Montgomery
Olden Mo
Wm Kaucher
Oregon Mo
Sam M Ruley
Oregon Mo
W B Cox Oto Mo
W S Forsyth
Paris Mo
W R McIlvaine
Phillipsburgh Mo
M B W Harman
Pickering Mo
W A McDowell
Platt River Mo

Dr M E Shelton
Poplar Bluff Mo
Dr Wm Hirons
Princeton Mo
G E Bedford
Rea Mo
Prof A L McRae
Rolla Mo
L C Saeger
Saint Charles Mo
Prof F E Nipher
Washington University
Saint Louis Mo
C G Taylor
Sedalia Mo
J S Chandler
Shelbina Mo
I N Morris
Stanberry Mo
G W Goodlett
(Stellada)
Windsor Mo
E A Pinnell
Steeleville Mo
W L Wilson
Vancleve Mo
J R Mayre
Vermont Mo
Prof Geo L Osborne
Warrensburgh Mo
Prof J H Frick
Warrenton Mo

R H Mansfield
Wellsville Mo
J A Truex
West Plain Mo
W H Liggett
Wheatland Mo
L A Dewey
Whiteside Mo
J R Dudley
Withers Mills Mo
Anthony Zeitinger
Zeitonia Mo

Montana.

Will Kennedy
Boulder Valley Mont
Mrs M W Alderson
Bozeman Mont
Geo T Wicks
Cokedale Mont
S M Corson
Choteau Mont
Arthur D Patton
(Dearborn Canyon)
Hogan Mont
College of Montana
Deer Lodge City Mont
S L Pratt
Elk Park Mont
Post Surgeon
Fort Custer Mont
Post Surgeon
Fort Keogh Mont
Wm Gaddis
Fort Logan Mont
Post Surgeon
Fort Missoula Mont
Post Surgeon
(Camp Poplar River)
Poplar Creek Agency Mont
J H Ray
Glendive Mont
Chas L Herzog
Great Falls Mont
E J Glass
Helena Mont
C A Wood
Horr Mont
R H Clendenin
Martinsdale Mont
J M Graham
Powderville Mont
Eugene Stark
Virginia City Mont

Nebraska.

R E Bowden
Agee Nebr
F S Thompson
Albion Nebr
Peter Fowlie
Ansley Nebr
E D Smith
Arborville Nebr
Dr A S Mansfield
Ashland Nebr
F Rein
Ashton Nebr
G D Carrington
Auburn Nebr
A H Gale
Bassett Nebr
Dr J T Armstrong
Beatrice Nebr
J M Barclay
Bookwalter Nebr
J F McGaughey
Brandon Nebr
L F Rector
Burwell Nebr
Geo B Mair
Callaway Nebr
O E Cooley
Cooleyton Nebr
E M Couch
Cornlea Nebr
Dr G Roberts
Creighton Nebr
Prof G D Swezey
Crete Nebr
Robert P Hoxsey
Crete Nebr
G A Loveland
Crete Nebr
E B Taylor
David City Nebr
Chas Seltz
De Soto Nebr
H H Calkins
Dunning Nebr
A Dahl
Ericson Nebr
J A Wood.
Ewing Nebr
Dr I Humphrey
Fairbury Nebr
Post Surgeon
Fort Robinson Nebr
Post Surgeon
(Fort Sidney)
Sidney Nebr
Bertha E Peck
Franklin Nebr
Isaac E Heaton
Fremont Nebr
P Daniel
Falls City Nebr
F M Flory
Geneva Nebr
G S Truman
Genoa Nebr
John P Finley
Gering Nebr
J M Callender
Haigler Nebr
Thos B A Watson
Hartington Nebr.
Dr J T Fleming
Harvard Nebr
O F Heartwell
Hastings Nebr
Wm Waterman
Way Springs Nebr
C A Ready
Hayes Centre Nebr
Dr C M Easton
Hebron Nebr
John Lane
Holdrege Nebr
J M Bird
Imperial Nebr
D A Piercy
Kennedy Nebr
D Henderson Jr
Kimball Nebr
Ira P Griswold
Lexington Nebr
University of Nebraska
Lincoln Nebr
John Ellis (Marquette)
Central City Nebr
J Hull
Minden Nebr
Agent B & M Ry
Mullen Nebr
Prof C D Rakestraw
Nebraska City Nebr
J H Hassinger
Nesbit Nebr
Dr W B Croll
Norfolk Nebr
E W Black
North Loup Nebr
G S Clingman
Oakdale Nebr
A U Morris
O'Neill Nebr
L A McNeill
Orleans Nebr
F M Larison
Ough Nebr
C Shieldstream
Palmer Nebr
T Hedges
Precept Nebr
E Smith
Ravenna Nebr
J A Chadbourne
Santee Agency Nebr
Sugar Experimental Station
Schuyler Nebr
L E Ost
Seward Nebr
G H Rogers
Springview Nebr
Mark Baldwin
Stanton Nebr
Henry Giger
Steinauer Nebr
F L Naylor
Superior Nebr
P W Risser
Syracuse Nebr
W L Dunlap
Tecumseh Nebr
Dr A D Nesbit
Tekamah Nebr
F D Heath
Thedford Nebr
W N Hunter
Turlington Nebr
W Bardon
Wallace Nebr
G Treat
Weeping Water Nebr
E G Bruner
West Point Nebr
Thos Donnegan
Whitman Nebr
Geo D Coutant
Wilcox Nebr
Mrs C W Le Bar
Wilcox Nebr
W H Davis
York Nebr

Nevada.

O B Vincent
Austin Nev
J R Harcourt
Belleville Nev
G Nicholl
Belmont Nev
Agent C P R R
Beowawe Nev
J G W Mitchell
Candelaria Nev
Prof C W Friend
Carson City Nev
Ford A Carpenter
Carson City Nev
W T Crane
(Cranes Ranch)
Elko Nev
D Fowler
Downeyville Nev
C H Sproule
Elko Nev
J F Cupid
Ely Nev
Leon M Kind
Eureka Nev
G W Dungan
Genoa Nev
C P Mengel
Hawthorne Nev
M Agler
(Hot Springs)
White Plains Nev
Mrs Ross Lewers
(Lewers Ranch)
Franktown Nev
E J Mather
McDermitt Nev
C J Adams
Mill City Nev
Miss Kate L McGill
(Monitors Ranch) Ely Nev
Agent C P R R
Palisade Nev
Wm Oothout jr
Palmetto Nev
N P Dooley
Pioche Nev
A C Pratt (South Camp)
Wellington Nev
State University
Reno Nev
L Allen
St Clair Nev
Mrs Walter Stofiel
Stofiel Nev
Wm Harton
Sunnyside Nev
O L C Fairchild
Tuscarora Nev
James B Gilmore
Tybo Nev
Prof Mark Averill
Virginia City Nev
C H Gordon
Wabuska Nev

New Hampshire.

F W Palmer
Antrim N H
Dr Q A Bridges
Berlin Mills N H
G W Bridges
Brookline N H
Hon W L Foster
Concord N H
N A Briggs
East Canterbury N H
P R Kimball
Grafton N H
John M Wilson
Groveton N H
Dartmouth College Obs'y
Hanover N H
Lake Winipiseogee
Cotton and Woolen M'f'g Co
Lakeport N H
Charles Nurse
Littleton N H
W Little
Manchester N H
Chas H Webster
Nashua N H
W C Gale
Newton N H
J L Binford
North Conway N H
D L Crosby
Peterborough N H
Miss Helen M Clark
Plymouth N H
G C Ward
Sanbornton N H
N B Waters
Stratford N H
E A Knowlton
Walpole N H
A A Higgins
West Milan N H

New Jersey.

H Allaire
Allaire N J
R Ross
Asbury Park N J
John H Eadie
Bayonne N J
Rev W J Leggett
Belleville N J
Samuel J Hixson
Belvidere N J
Prof C F Richardson
Beverly N J
L M Lee
Bivalve N J
E H Freeman
Blairstown N J
H A Jordan
Bridgeton N J
C L Swain
Boonton N J
L M Dye Jr
Camden N J
Dr J F Leaming
Cape May C H N J
Wm C Harris
Dover N J
H Y Postma
Egg Harbor City N J
J B Drake
Elizabeth N J
Dr I H Levy
Franklinville N J
Miss A S Yard
Freehold N J
H C Perry
Friesburg N J
R N Cornish
Gillette N J
James P Scullin
Hammontown N
M M Cook
Hanover N J
C M Norton
Hightstown N J
Dr F C Price
Imlaystown N J
Geo Fleming
Junction N J
Dr F W Larison
Lambertville N J
W L Lance Jr
(Lancewood)
Whiting N J
G W Hackenbury
Locktown N J
T J Beans
Moorestown N J
John B Collins
Mt Holly N J
F W Ricord
Newark N J
G C Sonn
Newark N J
Mrs G H Cook
New Brunswick N J
C V Meyers
New Brunswick N J
E W McGann
New Brunswick N J
D L Foster
Newton N J
W Lake
Ocean City N J
Rev S W Knipe
Oceanic N J
J T Probert
Paterson N J

E A Rodewald
Pensauken N J
W T Wilson
Penns Grove N J
John Neagle
Plainfield N J
S A Miller
Pochunk Mt
Deckertown N J
S Haines
Rancocas N J
J Fleming
Readington N J
A C Holdrum
River Vale N J
W H Lawson
Salem N J
P Hardcastle
Somerville N J
Dr W J Chandler
South Orange N J
D T Atwood
Tenafly N J
M G Pohl
Toms River N J
E R Cook
Trenton N J
Wm W Austin
Vineland N J
F G Brill
West Summit N J
H L Sabsovich
Woodbine N J

New Mexico.

A Knell
Albert N Mex
W S Burke
Albuquerque N Mex
L R E Paulin
Bloomfield N Mex
E A Sutherland
Chama N Mex
Henry C Pickles
Clayton N Mex
J M Fish
Coolidge N Mex
Eulogia Martinez
Dulce N Mex
Dr George T Gould
East Las Vegas N M
S W Loomis
Embudo N Mex
E A Clemens
Estalina Sps (via)
Magdalena N Mex
T W McSchoolie
Folsom N Mex
Post Surgeon
Fort Bayard N Mex
Post Surgeon
Fort Wingate N Mex
J E Whitmore
Gallinas Spring N Mex
E M Cosner
Halls Peak N Mex
J E Smith
Hillsborough N Mex
R H Hills
Hills Ranch
Carthage N Mex
Mrs H T Findley
La Luz N Mex
Agricultural Exp Sta
Las Cruces N Mex
Richard Pohl
Los Lunas N Mex
E K Caldwell
Monero N Mex
S D Webster
Olio N Mex
H B Hersey
Santa Fé N Mex
C N Anthony
Socorro N Mex
L Hines
Springer N Mex
Wm L McClure
Taos N Mex
S M Parker
White Oaks N Mex

New York.

H R Ainsworth M D
Addison N Y
Prof F S Place
Alfred Centre N Y
Prof John P Slocum
Angelica N Y
J D Tate
Arcade N Y
Miss Etta L Wilcox
Arkwright N Y
S C Suydam
Baldwinsville N Y
Supt State Hospital
Binghamton N Y
Henry Studor
(Bisby Lodge)
White Lake Corners N Y
Dr Wm H Ross
Brentwood N Y
D B Stillman
Brookfield N Y
H J Davis
Canaseraga N Y
Prof H Priest
Canton N Y
Thomas Manning
(Boyds Corners)
Carmel N Y
Chas E Taylor
Constableville N Y
G Pomeroy Keese
Cooperstown N Y
Prof D L Bardwell
Cortland N Y
Wm Bolling
Dunkirk N Y
Wm P Hunt
(Eden Centre)
Eden N Y
Gerity Brothers
Elmira N Y
T P Yates
(Factoryville)
Waverly N Y
Robert Warwick
Fleming N Y
Mrs N S Yates
Geneva N Y
C L Williams
Glens Falls N Y
L W Chamberlain
Gloversville N Y
H O Fairchild
Hammondsport N Y
C H Spaulding
Hess Road Station N Y
James Hyatt
(Honeymead-brook)
Bangall N Y
Chas E Whitney
Humphrey N Y
Engineering Dept
Cornell University
Ithaca N Y
Prof E A Fuertes
Ithaca N Y
R M Hardinge
Ithaca N Y
C L Bishop
Jamestown N Y
Henry A Stone
(Kingston)
Rondout N Y
Arthur K Harrison
Lebanon Springs N Y
Wm L Annin
Le Roy N Y
W D Lovell
Lockport N Y
C S Rice
Lowville N Y
Phillip J Mullin
Lyon Mountain N Y
Dr M A Veeder
P O Box 602 Lyons N Y
Frank B Tracy
(Marshland)
Apalachin N Y
Albert B Johnson
Malone N Y
Dr S Talcott
Middletown N Y
Edward A Smiley
Minnewaska N Y
J E White
Mt Morris N Y
G A Yates
New Lisbon N Y
C A Wooster
North Hammond N Y
Chas Fenton
Number Four N Y
Dr P M Wise
Ogdensburg N Y
J P Davis
Oxford N Y
E B Bartlett
(Palermo)
Vermillion N Y
Post Surgeon
Plattsburgh Barracks N Y
Prof John M Dolph
Port Jervis N Y
W H Jeffers
(near Perry City)
Trumansburgh N Y
G W F Smith
Potsdam N Y
Vassar College Obs'y
Poughkeepsie N Y
Wm Weaver
Quaker Street N Y
Dr H C Sutton
Rome N Y
J H Coryell
Romulus N Y
Post Surgeon
Madison Barracks
Sackets Harbor N Y
Selah B Strong
Setauket N Y
Rev T J Hamilton
Sherman N Y
James E Wilson
South Canisteo N Y
D C Sharpe
South Kortright N Y
R T Church
Turin N Y
Thomas Birt
Utica N Y
M F Webster
Victor N Y
George A Fairbank
Watertown N Y
Dr James K King
Watkins N Y
O F Corwin
Wedgwood N Y
Post Surgeon
Military Academy
West Point N Y
Post Surgeon
Willets Point
Whitestone N Y
Prof O R Willis
White Plains N Y
Post Surgeon
Fort Niagara
Youngstown N Y

North Carolina.

Dr Karl von Ruck
Asheville N C
J H Greene
Bakersville N C
Miss Maggie Cook
Boone N C
Prof J W Gore
Chapel Hill N C
D E Stearns
Columbus N C
H C Dunn
Concord N C
T B Lindsley
Douglas N C
Barry C Hawkins
Horse Cove N C
Mrs R L Beall
Lenoir N C
W J Scroggs
Lexington N C
Prof L W Bagley
Littleton N C
Prof S D Bagley
Louisburg N C
J A Sinclair
Marion N C
Geo I White
Morganton N C
Prof H T J Ludwig
Mt Pleasant N C
J W Ashby
Mt Airy N C
Prof Geo S Wills
Oak Ridge N C
Prof A H Merritt
Pittsborough N C
Dr Herbert B Battle
Raleigh N C
C F von Hermann
Raleigh N C
Dr J M Stansil
Rockingham N C
Dr James A Wise
Roxborough N C
J A Hedrick
Salisbury N C
Robt P McAnally
Saxon N C
R J Noble
Smithfield N C
H L Kimrey
Soapstone Mount N C
Paul Clark
Southern Pines N C
E V Zoeler
Tarboro N C
J L Haywood
Wadeville N C
Dr J M Gallagher
Washington N C
T A Clark
Weldon N C
H Clay Williams
Willeyton N C

North Dakota.

Geo H Fay
Ashley N Dak
W H Fallon
Bismarck N Dak
D H McArthur
Bottineau N Dak
H B Walton
Carrington N Dak
H D Orvis
Churchs Ferry N Dak
Harvey Kepler
Dawson N Dak
Rev Jno Orchard
Dickinson N Dak
Chas Ackley
Ellendale N Dak
Prof E F Ladd
Fargo N Dak
F G Bartlett
Forman N Dak
E B Gose
Fort Stevenson N Dak
Post Surgeon
Fort Yates N Dak
S J Pound
Gallatin N Dak
H H Mott
Grafton N Dak
D R McGinnis
Grand Forks N Dak
N S French
Grand Rapids N Dak
Leo L Lang
Hope N Dak
Harry B Penhollow B S
Kelso N Dak
A M Tofthagen
Lakota N Dak
E S Foley
Medora N Dak
A C O Lomen
Milton N Dak
S S Marsh
Minto N Dak
Julius H Hoof
Napoleon N Dak
J A Power
Power N Dak
M V Hostetter
Reynolds N Dak
John Cryderman
St Johns N Dak
John McMillan
Seymour N Dak
Hon J J Dobbin
Valley City N Dak
C A McKean
Wahpeton N Dak
G F McDonald
White Earth N Dak
Peter Ross
Wild Rice N Dak
Peter M Cudhie
Willow City N Dak
C L Thomson
Woodbridge N Dak
Miss Sophia C Long
Yule N Dak

Ohio.

Prof H V Egbert
Akron Ohio
James W Barnes
Annapolis Ohio
Dr P H Clark
Ashland Ohio
Prof Eli Dunkle
Athens Ohio
L L Reed
Auburn Ohio
S M Painter
Bangorville Ohio
Frank E Fitch
Bellevue Ohio
P W Barton
Bement Ohio
J W Powell
Benton Ridge Ohio
S Williamson
Bethany Ohio
J W Scott
Bissells Ohio
S R Morris
Bloomingburg Ohio
S Mehaffy
Cambridge Ohio
C Peckinpaugh
Camp Dennison Ohio
C F Stokey
Canton Ohio
R A Beatty
Cardington Ohio
J W Helfrich
Carrollton Ohio
Prof W F McDaniel
Celina Ohio
J W Sage
(Chicago Junction)
Chicago Ohio
E T M Williams
Clarksville Ohio
G A Hyde
85 Kennard st
Cleveland Ohio
L Reeves
Colebrook Ohio

Hon L N Bonham
Columbus Ohio
C M Strong
Columbus Ohio
W H Baker
Ohio State University
Columbus Ohio
Mrs Edith E L Boyer
Dayton Ohio
B R Ault
Demos Ohio
A C Beardsley
Ellsworth Ohio
C W Goodspeed
Elyria Ohio
Prof A C Redding
Findlay Ohio
Robbins Bros
Fostoria Ohio
O A Cory
Frankfort Ohio
S M Luther
Garrettsville Ohio
Dr T W Gordon
Georgetown Ohio
W B Longstreth
Gratiot Ohio
Dones Bros
Greenfield Ohio
J E Bentley
Green Hill Ohio
C G Katzenberger
Greenville Ohio
J Conn
Hackney Ohio
James Bull
Hanging Rock Ohio
Rev Edward Seymour
Harbor Ohio
H Twohey
Hedges Ohio
J W Doncaster
Hillhouse Ohio
Prof G H Colton
Hiram Ohio
Dr J B Owsley
Jacksonboro Ohio
L J Demarest
Kenton Ohio
J D Haderman
Leipsic Ohio
J C Levering
Levering Ohio
Dr G W Dallison
Logan Ohio
W S Dean
Lordstown Ohio
J W Freye
Lowell Ohio
Prof T D Biscoe
Marietta Ohio
E H Raffensberger
Marion Ohio
Geo F Craig
McArthur Ohio
C H Morris
McConnelsville Ohio
G F Copeland
Millport Ohio
Simon Waterston
Montpelier Ohio
Jos A Hook
New Alexandria Ohio
C Hall
New Berlin Ohio
Dr A M Beers
New Comerstown Ohio
Wm H Slabuck
New Holland Ohio
H D Gowey
North Lewisburgh Ohio
S Edgerton
North Royalton Ohio
Prof F F Jewett
Oberlin Ohio
E U Hyde
Orangeville Ohio
J W Ridenour
Pataskala Ohio
Dr D N Allard
Pomeroy Ohio
Dr D B Cotton
Portsmouth Ohio
J B Gish
Rittman Ohio
T G Briggs
Sharon Center Ohio
T B Arnett
Shenandoah Ohio
A H Hoge
Sheperdstown Ohio
George Olinger
Springborough Ohio
Prof T H Sonnedecker
Tiffin Ohio
R B Crouch
Tyrone Ohio
Dr A Billhardt
Upper Sandusky Ohio
W M Smith
Van Wert Ohio
John Courtright
Walnut Ohio
Prof C W Williamson
Wapakoneta Ohio
Thomas Mikesell
Wauseon Ohio
D Lorbach
Waverly Ohio
E B Michener
Waynesville Ohio
Prof J Haywood
Westerville Ohio
L S Motte
West Milton Ohio
Dr F Young
Weymouth Ohio
Mrs E P Wheeler
Wheeler Ohio
Ohio Agri Exp Station
Wooster Ohio
A G Frost
Youngstown Ohio

Oklahoma.

C A Cleveland
Anadarko Okla
A R Henderson
Buffalo Okla
Wm Weselhoft
Burnett Okla
Post Surgeon
Fort Reno Okla
Post Surgeon
Fort Sill Okla
S C Grasham
Gate City Okla
Morris Collar
Guthrie Okla
Perry Rodkey
Keokuk Falls Okla
Phil E Belt
Kingfisher Okla
Henry C Sweet
Mangum Okla
James I Widmeyer
Oklahoma City Okla
Gertrude Sherbourne
Ponca Okla
Miss Cosette Stratton
Sac & Fox Agency Okla

Oregon.

John Briggs
Albany Oregon
James W Smith
Arlington Oregon
F H Carter
Ashland Oregon
A C Muecke
Aurora Mills Oregon
K N Staehr
Bake Oven Oregon
Geo Bennett
Bandon Oregon
T L Arnold
Beulah Oregon
W C Byrd
Burns Oregon
E S Penfield
Canyon City Oregon
State Agr'l College
Corvallis Oregon
W B Emmons
Crook Oregon
Dr G Wigg
(East Portland)
Portland Oregon
Thos Pearce
Eola Oregon
Prof S E McClure
State University
Eugene Oregon
Pacific University
Forest Grove Oregon
J S Gray
Gardiner Oregon
Miss Jennie A Reeher
(Glenora)
via Bay City Oregon
J B Paddock
Grants Pass Oregon
J H Neal
(Happy Valley)
Diamond Oregon
W O Royce
Hardman Oregon
A Smith
Heppner Oregon
Dr P G Barrett
Hood River Oregon
W H Goudy
Hubbard Oregon
E Britt
Jacksonville Oregon
J D McCully
Joseph Oregon
A Y Beach
Lake View Oregon
J K Romig
La Grande Oregon
Saml T Malehorn
Langlois Oregon
L A Miller
Lone Rock Oregon
Capt W Harris
McMinnville Oregon
Rev Dr Urban Fisher S J
Mount Angel Oregon
Edmund Robinson
Newberg Oregon
Dr H J Fuller
New Bridge Oregon
J H Zahner
Pendleton Oregon
B S Pague
Portland Oregon
C T Roberts
Salem Oregon
Hon J A Wright
Sparta Oregon
S L Brooks
The Dalles Oregon
George Hunt
Tillamook Oregon
Dr H W Vincent
Toledo Oregon
F McDonald
Vale Oregon
G W Dallas
Vernonia Oregon
W C Stiles
Williams Oregon

Pennsylvania.

Dr C B Dudley
Altoona Pa
J Grathwohl
Blooming Grove Pa
A H Boyle Blue Knob Pa
David H Harvey
(Browers Lock)
Oaks Pa
J E Pague
Carlisle Pa
W T Gordon
Coatesville Pa
Dr M H Boye
Coopersburgh Pa
Wm Loveland
Corry Pa
T H Walton
Doylestown Pa
J R Wagner
Drifton Pa
Theo Day
Dyberry Pa
Dr J W Moore
Easton Pa
F C Wintermute
East Mauch Chunk Pa
C F Sweet
Edinborough Pa
T B Lloyd
Emporium Pa
J C Hilsman
(Forks of Neshaminy)
Rush Valley Pa
G W Wood
Frederick Pa
E C Wagner
Girardville Pa
N Moore
Grampian Pa
Wm Shipe
Hamburgh Pa
Dr T B Orchard
(Salem Corners)
Hamlinton Pa
Prof J A Stewart
Hollidaysburgh Pa
John Torrey
Honesdale Pa
Prof W J Swigart
Huntingdon Pa
Prof S C Schmucker
Indiana Pa
E C Lorentz
Johnstown Pa
G H Kemp
Kane Pa
B P Kirk
Kennett Square Pa
R J Mickey
Kilmer Pa
Lewis T Lampe
Lancaster Pa
H L Shull
Lansdale Pa
G W Hayes
Lebanon Pa
Geo W T Warburton
Le Roy Pa
Prof Wm G Owens
Lewisburgh Pa
Howard Miller
Lewisburgh Pa
J T Ambrose
Ligonier Pa
Prof J A Robb
Lock Haven Pa
O V Metzger
(Aqueduct)
Logania Pa
Thos F Sloan
McConnellsburgh Pa
Chas Graves
Meadville Pa
W T Butz
New Castle Pa
Dr Geo M Grim
Ottsville Pa
J C Trautwine
3301 Haverford st
W Philadelphia Pa
John E Codman
Bureau of Water
Philadelphia Pa
H L Ball
Philadelphia Pa
John Comly
1529 Centennial Ave
Philadelphia Pa
T F Townsend
Philadelphia Pa
Franklin Institute
Philadelphia Pa
Knowles Croskey
Phœnixville Pa
R C Stover
Point Pleasant Pa
Dr Chas Moore
Pottstown Pa
R J Lanyon
12 South 8th st
Pottsville Pa
J L Heacock
Quakertown Pa
Franklin Yager
Reading Pa
Miss E A G Apple
Saegerstown Pa
J A Roth
Seisholtzville Pa
J M Boyer
Selins Grove Pa
Armstrong & Brownell
Smethport Pa
Geo Lowder
(Smiths Corners)
Point Pleasant Pa
W M Schrock
Somerset Pa
B M Hall
South Eaton Pa
Prof Wm Frear
State College Pa
Prof Susan J Cunningham
Swarthmore Pa
Wm Hunt
Uniontown Pa
H D Deming
Wellsborough Pa
Dr J C Green
West Chester Pa
Harry Alger
Westtown Pa
A W Betterly
Wilkes Barre Pa
Chas Beecher
Wysox Pa
Mrs L H Grenewald
York Pa

Rhode Island.

N G Herreshoff
Bristol R I
N Helme
Kingston R I
Agr Exp Station
Kingston R I
G W Pratt
Lonsdale R I
C H Cannon
Olneyville R I
J H Walker
Pawtucket R I
Office City Engineer
Providence R I
Ladd Observatory
Providence R I
D W Hoyt
Providence R I

South Carolina.

Hon A P Butler
Columbia S C
Observer Weather Service
Columbia S C
J W Earle
(Evergreen)
Hollands Store S C
J P McNair
Kitchings Mills S C
W G Peterson
(Longshore)
Newberry S C
H D Elliott
Port Royal S C

Miss N L Dawson
Simpsonville S C
J J Lucas
Society Hill S C
Dr W W Anderson
Statesburgh S C
E Gillard
Trial S C
J Pagan
Winnsborough S C
J R Schorb
Yorkville S C

South Dakota.

D G Gallette
Aberdeen S Dak
W S Hill
Alexandria S Dak
Thos Aschroft
Ashcroft S Dak
J H Cobb
Bowdle S Dak
E A Cooper
Britton S Dak
Prof Louis McLouth
Brookings S Dak
Lewis P Shew
Carthage S Dak
W F Van Dervoort
Castlewood S Dak
W H Boals
Clark S Dak
Geo E Masters
De Smet S Dak
Isaac Killian
Elkton S Dak
F J Cross (Cross)
Etta Mine S Dak
A A Humphrey
Faulkton S Dak
G A Perly
Flandreau S Dak
M K Judy
Forestburg S Dak
W F Smith
Forest City S Dak
Post Surgeon
Fort Meade S Dak
Post Surgeon
Fort Randall S Dak
Post Surgeon
Fort Sully S Dak
Wm B Tapley
Frankfort S Dak
Dr W H Gates
Gary S Dak
Frank Drew
Highmore S Dak
W H Davis
Hitchcock S Dak
Geo Melchert
Hotch City S Dak
R S Person
Howard S Dak
S W Glenn
Huron S Dak
A S Stuver
Kimball S Dak
M H Dale
Mellette S Dak
D W Diggs
Millbank S Dak
J E Gilbert
Mitchell S Dak
J W Strouse
Oelrichs S Dak
Mrs M F Goddard
Onida S Dak
B W Kumler
Parker S Dak
J S Headley
Parkston S Dak
Jno O Dresson
Piedmont S Dak
G D Young
Plankinton S Dak
James F Cross
Rosebud S Dak
L V Schneider
Salem S Dak
Dr E S Carter
Sioux Falls S Dak
J H Warren
Spearfish S Dak
Grant Frederick
St Lawrence S Dak
E G Merriam
Travare S Dak
H Richmond
Tyndall S Dak
H S Fletcher
Watertown S Dak
J F Zimmerman
Wentworth S Dak
Chas N Curtis
Wessington S Dak
Harvey M Russ
Wessington Springs S Dak
F H Brown
Whitewood S Dak
G W Fink
Wolsey S Dak

Tennessee.

J K R Wallace
Andersonville Tenn
Rev C F Williams
Ashwood Tenn
P B Calhoun
Austin Tenn
Miss Daisy Bell
Bethel Springs Tenn
G W Martin
(Missionary Ridge)
822 Cherry Street
Chattanooga Tenn
Prof J A Lyon
Clarksville Tenn
J I Hall
Covington Tenn
L Boynton
Dunlap Tenn
J C Diemer
Fayetteville Tenn
Chas W Anderson
Florence Station Tenn
Dr John A Campbell
Franklin Tenn
W H Brown
Greeneville Tenn
J P Suverkrop
Harriman Tenn
R Downey
Hohenwald Tenn
W C Hall
Jacksboro Tenn
Hon T C Long
Jackson Tenn
Dr J H Moninger
Johnson City Tenn
Alfred D Foy
Lookout Mountain Tenn
J H Burrow
Lynnville Tenn
Fred T Fisher
McMinnville Tenn
Dr J D Plunket
Nashville Tenn
J B Marbury
Nashville Tenn
H C Bate
Nashville Tenn
Dr L W Hooper
Newport Tenn
W C Thompson
Nunnelly Tenn
J C Williamson
Parksville Tenn
Ruskin Fergusson
Riddleton Tenn
Dr S M Miller
Rogersville Tenn
Dr W F G Wilson
Rugby Tenn
C L Hefner
Savannah Tenn
B P Fagan
Sharp Tenn
W J Breeding
Spring Dale Tenn
Hardie Johnson
Sweet Water Tenn
Dr C Buchanan
Waynesborough Tenn

Texas.

N L Bartholomew
Albany Tex
Prof H B Wayland
Aurora Tex
Dr Q C Smith
Austin Tex
Ernest Kruger
Austin Tex
Dr J F Weatherhead
Boerne Tex
W H Potter (Bear Creek)
Brady Tex
A D Snody
Big Spring Tex
H Stevens
Brazoria Tex
Prof C S Newhall
Brownwood Tex
W M Spitler
Burnet Tex
G H Chipman
Childress Tex
T O James
Coldwater Tex
Prof Duncan Adriance
College Station Tex
W A Crowder
Colorado Tex
W H Hamilton
Box 169 Corsicana Tex
G A Eisenlohr
Dallas Tex
J A Whitfield
Devine Tex
Anthony Blum
Durham Tex
J C Edgar
Duval Tex
J A Feddeman
Eastland Tex
H Graves (Epworth)
Hale City Tex
Henry T Williams
(Flower Bluff)
Corpus Christi, Tex
J H Angel
Floydada Tex
J N Morris
Forestburgh Tex
Post Surgeon
Fort Brown
Brownsville Tex
Post Surgeon
Ft Clark Brackettville Tex
Post Surgeon
(Camp Eagle Pass)
Eagle Pass Tex
Post Surgeon
Ft Hancock Tex
Post Surgeon
Ft McIntosh Laredo Tex
Post Surgeon
Camp Pena Colorado
Marathon Tex
J H Hudson
Marshall Tex
Post Surgeon Ft Ringgold
Rio Grande City Tex
Genl F M Clark
Fort Worth Tex
A Striegler
Fredericksburgh Tex
D T Ragsdale
Gainesville Tex
D D Bryan
Galveston Tex
I M Cline
Galveston Tex
A B Grant
Graham Tex
W J Crowley
Grape Vine Tex
Dr J E Lay
Hallettsville Tex
F Lusby
Hartley Tex
P D Sanders
Haskell Tex
K D Blankenship
Highland Tex
J C Rickli
(Kent) Fort Davis Tex
G L Stone
McGregor Tex
J H Hudson
Marshall Tex
Louis Runge
Menardville Tex
S G Lackey
Mesquite Tex
Dr J C Riley
Mountain Spring Tex
R C Monk
Nacogdoches Tex
Capt Julius Geisecke
New Braunfels Tex
C Runge
New Ulm Tex
A L Rush
Ochiltree Tex
E H Snider
Panter Tex
Robert Henry
Quanah Tex
Hamilton Foster
Roby Tex
Capt Robt Strachan
Rockport Tex
Thos Wood
Round Rock Tex
Judge Alex McNabb
San Angelo Tex
Gus A Duerler jr
San Antonio Tex
G H Hutchins
Sierra Blanca Tex
R MacNutt
Sierra Blanca Tex
C M Tilford
(Silver Falls)
Mt Blanco Tex
W Goodrich Jones
Temple Tex
Charles F Mercer
Venus Tex
Erskin Borden
Victoria Tex
Dr O Eastland
Wichita Falls Tex

Utah.

Harry Fennimore
Beaver Utah
B B Quinn
Bingham Utah
Agent R G & W R R
Cisco Utah
Willard Rogers
Deseret Utah
J J Starley
Fillmore Utah
Post Surgeon
Fort Duchesne Utah
B F Cooke
Grouse Creek Utah
F Blumel
(Lake Park)
Farmington Utah
William Brown
Levan Utah
Thos A Jeffery
Loa Utah
James Dryden
Utah Exp Sta
Logan Utah
E Caffall
Losee Utah
Agent R G & W R R
Manti Utah
R Moncur
Mt Carmel Utah
H Crouse
Moab Utah
W W Crossman
Ogden Utah
Alex Matheson
Parowan Utah
T H Martin
Provo City Utah
Sarah J Mason
Richfield Utah
Seth A Pymm
St George Utah
G N Salisbury
Salt Lake City Utah
Agent R G & W R R
Scofield Utah
J Robbins
Snowville Utah
Agent R G & W R R
(Soldiers Summit)
Scofield Utah
James Hughes
Stockton Utah
Agent R G & W R R
Thistle Utah

Vermont.

W H Childs
Brattleboro Vt
W B Gates
55 Elmwood Avenue
Burlington Vt
H L Bixby
Chelsea Vt
C H Lane
Cornwall Vt
J H Mears
Enosburgh Falls Vt
E A English
Hartland Vt
Maj W O Cartwright
Saxtons River Vt
Mrs J J Allbee
Simonsville Vt
C E Brown
South Royalton Vt
H F J Scribner
Strafford Vt
A Whitehead
Vernon Vt
R E Pember
Wells Vt
H F Dunham
Woodstock Vt

Virginia.

Edw L C Scott
Ashland Va
D MacGregor
Avon Va
J W Fox Sr
Big Stone Gap Va
W N Stone
Bedford City Va
C R Moore
Birdsnest Va
W O Frith
Blacksburgh Va
O A Brown
Cape Charles Va
A H Tuttle
Charlottesville Va
A E White
Clifton Forge Va
D A Heatwole
Dale Enterprise Va
C W Richardson
Hot Springs Va
Prof H D Campbell
Lexington Va
J N Ryker
Lynchburgh Va

A T Lincoln
Marion Va
R V Gaines
Mossing Ford Va
G Dunn
Nottoway C H Va
Prof J M Colson Jr
Petersburgh Va
W H Pleasants
Richmond Va
Prof S C Wells
Salem Va
B W Jones
Spottsville Va
W N Parrott
Stanardsville Va
W C Hedrick
Staunton Va
W B Steele
Stephens City Va
H J Heuser
Wytheville Va

Washington.

W B Mack
Aberdeen Wash
J W Bird
Anacortes Wash
J H Wagner
Centreville Wash
W H Mossman
Chehalis Wash
Charles Johnson
Chelan Wash
Adam Stoneberger
Colfax Wash
R C Willis
Doe Bay Wash
Rev S R S Gray
East Sound Wash
Ruth Kemahan
Eatonville Wash
Samuel Thompson
Ellensburgh Wash
Jno W Clendening
Fort Simcoe Wash
Post Surgeon
Fort Spokane
Miles Wash
Post Surgeon
Fort Townsend
Port Townsend Wash
R M Hoskinson
Madrone Wash
H B Scudder
North Yakima Wash
Observer Weather Bureau
Olympia Wash
Thomas M Whitcomb
(Pine Hill)
Lyle Wash
F W D Mays
Pomeroy Wash
Hans Mumm
Rosalia Wash
Alpheus Byers
Seattle Wash
Z McLaughlin
(Sehome)
New Whatcom Wash
Dr C P Culver
Tacoma Wash
Mrs C B Carpenter
Vashon Wash
R W Starr
Waterville Wash

West Virginia.

B P Terrill
Bluefield W Va
Dr D T E Casteel
Buckhannon W Va
Chas M Smith
Buckhannon W Va
J Benninger
Central Station W Va
Geo W Craig
Charleston W Va
Jno H Wood
Danville W Va
A Thompson
Davis W Va
J J Tierney
Elkhorn W Va
Henry Resseger
Ella W Va
Levi Johnson
Glenville W Va
O G Augir
Grafton W Va
Lon H Hutchinson
Huntington W Va
J E Murdock
Kingwood W Va
Geo W Van Metre
Martinsburgh W Va
John M Judy
Moorefield W Va
West Virginia University
Morgantown W Va
John W Chapman
New Cumberland W Va
N Bandi
New Martinsville W Va
L W Nuttall
Nuttallburgh W Va
T G Field
Parkersburgh W Va
W W Dent
Parkersburgh W Va
W H Gilbert
Piedmont W Va
D Titchenell
Pleasant Hill W Va
W D Holmes
Point Pleasant W Va
Robt Morris
(Harrisville)
Ritchie C H W Va
W C Diller
Romney W Va
Ed Corder
Spencer W Va
G H Trembly
Tannery W Va
Christian Schnepf
Wheeling W Va

Wisconsin.

A J Smith
Amherst Wis
Clem F Kimball
Appleton Wis
Wm Toole
Baraboo Wis
E W Pierce
Barron Wis
Prof F W Denison
Bayfield Wis
Prof H B Hubbell
Beaver Dam Wis
L M Burt
Black River Falls Wis
B C Curtis
Cadiz Wis
R C Worthington
Centralia Wis
John Erb
Columbus Wis
Hon John Masbaum
Crandon Wis
E S Austin
Delavan Wis
Joseph G Lawton
De Pere Wis
Rev W N Sloane
Eau Claire Wis
J E Breed
Embarrass Wis
John Halter
Florence Wis
J C Wedge
Fond du Lac Wis
S N D Smith
Harvey Wis
Prof E V Wernick
Hillsborough Wis
Prof E P Frost
Hudson Wis
E B Heimstreet
Janesville Wis
Rev A Brown
Juneau Wis
E S Koepenick
Koepenick Wis
Edward Pollock
Lancaster Wis
A J Looze
Lincoln Wis
Washburn Observatory
Madison Wis
Miss Anna Lups
Manitowoc Wis
J H Treat
Meadow Valley Wis
Dr F Robert Zeit
Medford Wis
A Pillsbury
Menomonie Wis
W L Moore
Milwaukee Wis
Wm Heaslett
Neillsville Wis
Aug A Paulsen
New Holstein Wis
John Bender
Oconomowoc Wis
W K Smith
Oconto Wis
C W Staples
Osceola Mills Wis
J Rufus Hunter
Oshkosh Wis
Dr O G Frink
Pepin Wis
Robert Barnsdale
Plover Wis
R C Kann
Port Washington Wis
Frank Cornelius
Prairie du Chien Wis
Rev E M Corey
Raymond Wis
Dr H M Ludwig
Richland Centre Wis
R W Fish
Rhinelander Wis
J G Skeels
Sharon Wis
Col W S Wood
Shawano Wis
E R Daniels
Shell Lake Wis
E W Crane
Sparta Wis
J N King
Valley Junction Wis
F W Alexander
Viroqua Wis
Chas J Salick
Watertown Wis
O V B Dey
Waukesha Wis
Robert Reynolds
Weston Wis
W Phillips
Westfield Wis
H H Scott
Whitehall Wis

Wyoming.

O K Garvey
Casper Wyo
E M Ravenscraft
Cheyenne Wyo
Chas A Morrison
Evanston Wyo
Post Surgeon
Fort McKinney Wyo
Post Surgeon
Camp Pilot Butte
Rock Springs Wyo
Post Surgeon
Fort Yellowstone
Mammoth Hot Springs Wyo
Post Surgeon
Fort Washakie Wyo
J S Meyer
Lander Wyo
F S Lusk
Lusk Wyo
J D Parker
Saratoga Wyo
Sundance Exp Farm
Sundance Wyo
M R Johnston
Wheatland Wyo

Foreign.

Prof J Bolam
Govt Naviga School
14 Dock Place
Leith Scotland
Dr C F Hering
Burnside (Coronie)
Colony of Surinam
Dutch Guiana S A
G J Gibbs
Grand Turk
Turks Islands Brit W I
Wm S Barr
Hamilton Bermuda
Prof M Leal
Leon
Guanajuato Mexico
Director
Astro and Met'l Obs'y
Mazatlan Mexico
Director Cen Met Obs'y
City of Mexico Mexico
J C Herring
Topolobampo
Sinaloa Mexico
Prof G Baturoni
Vera Cruz Mexico
Prof C H McLeod
McGill College Obs'y
Montreal Canada
Prof P Scherer
Meteorological Obs'y
Port au Prince Hayti
Director Catholic Institute
Puebla Mexico
H Patrick
La Logia
Sinaloa Mexico
Curtis J Lyons
Honolulu
Hawaiian Islands
Rafael Junquera
Santiago de Cuba
G Murdock
St Johns
New Brunswick
Jos Ridgeway
St Thomas Danish W I